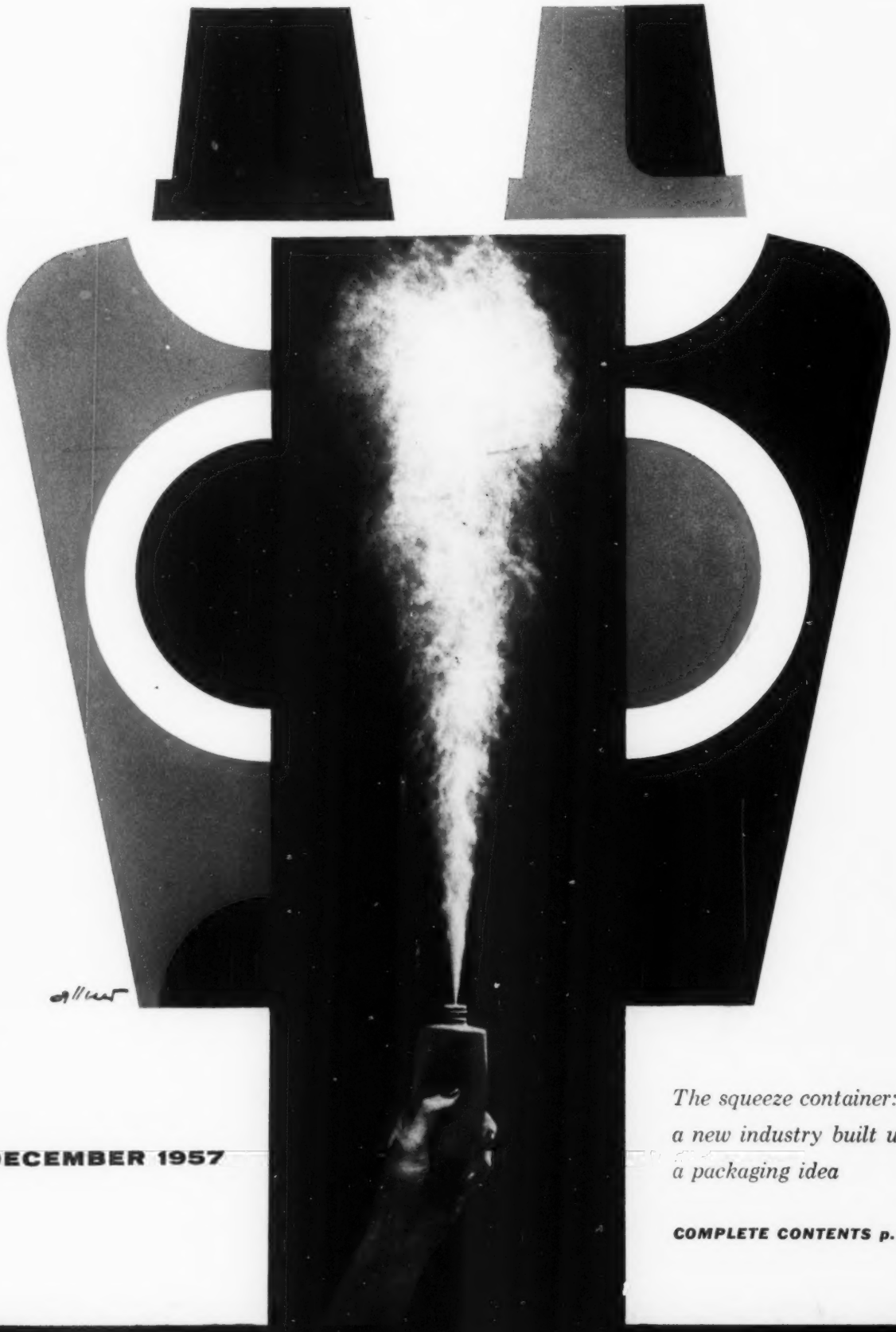
MODERN PACKAGING



The squeeze container: a new industry built upon a packaging idea

COMPLETE CONTENTS p. 2

DECEMBER 1957

Illustration courtesy of THE CHASE MANHATTAN BANK

What happens when adhesives go to sea?

Adhesives that actually resist water hold labels tight and protect a product's identity against every form of moisture: Ice-pail submersion. Bathroom condensate. Quick-freeze dew formation.

Other adhesives have high heat resistance. They let moisture out: Asphalt can be packed in multiwall bags and sealed while steaming hot. Still other adhesive coatings provide a moisture vapor barrier. They keep moisture in: Fresh foods don't wither.

These adhesives, which are made from vegetable, casein and resin bases, must fulfill many requirements. They must be capable of bonding a wide range of surfaces. Be rigid or flexible. Clean machining. And instant drying to keep pace with today's highspeed production.

National is a major producer of industrial adhesives through chemistry—
a result of selective research and development.

STARCHES National ADHESIVES
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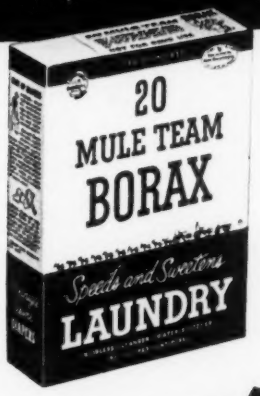
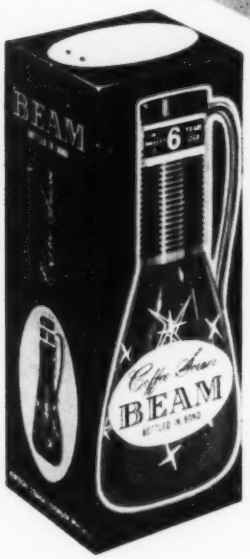
NATIONAL STARCH PRODUCTS INC., 270 MADISON AVE., NEW YORK 16, N. Y.

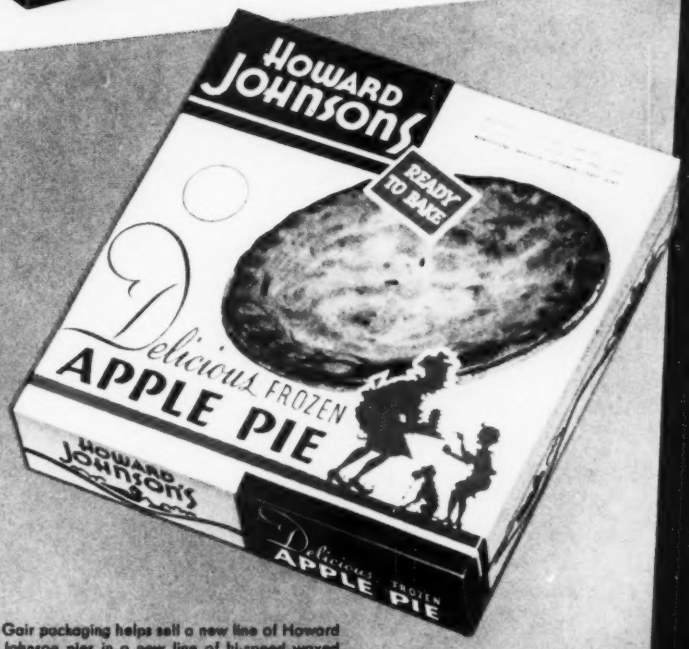
Tailor-made carton service *by* Gair



Gair produced a billboard for 20 Mule Team Borax—product identity, bold and bright on clear white board. Brand name selling with a climax of rich color by Gair!



Gair's clean, clear letterpress printing on white clay-coated board sells this bourbon decanter for Beam. Strong Beam identity close-up and at a distance!



Gair packaging helps sell a new line of Howard Johnson pies in a new line of hi-speed waxed cartons. Quick as a wink, Gair sells appetite-appeal and product identity with vibrant color.

Gair has a proven flair for creating cartons that sell. Gair Service is also a proven asset to satisfied customers everywhere. Discover how *your* product can be even more of a prize in a package by Gair—call your Gair representative or write Gair, today.

GAIR

creative engineering in packaging

BOXBOARD AND FOLDING CARTON DIVISION OF CONTINENTAL CAN COMPANY

530 FIFTH AVENUE, NEW YORK 36, N. Y.

MODERN PACKAGING®
December 1957
Vol. 31 No. 4

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Meet the expert

Necessity is breeding a new kind of packaging expert. His role is more important than his name suggests. He's called a "rack jobber."

You'd better listen to him, because he can make or break your product in today's markets. And we don't mean just the supermarkets, although that's where the rack jobber primarily operates. He knows from hard experience just what it takes to sell the supermarket shopper—and that's the same shopper, remember, that shops in department stores and drug stores and hardware stores and every other kind of store you can think of, under just about the same conditions of self selection and self sell.

Most supermarkets, whether chain or independent, today rely completely on the jobber to service their non-foods departments. He picks the products, he determines what sells and he ruthlessly turns away what doesn't sell. Because he knows that, in any self-selection situation, it's the package that triggers the consumer's impulse to buy, it's the package more often than not that governs *his* decision.

Smart packagers aiming their products at the rack-jobbed sections of supermarkets learned long ago to seek the jobber's advice. And the time has come when every packager selling any kind of consumer goods anywhere ought to take a long, hard look at the packaging principles which the rack jobber preaches. He knows what he's talking about and—unlike most of us who consider ourselves experts on packaging—he's completely uninfluenced by tradition, by personal taste, by hidden persuaders, by the man in the corner office, or by any consideration other than the one that really counts: *Will it sell?*

The fact is that the rack jobber is in a far better position to judge packaging than packagers themselves. In the few short years that he has built up the tremendous non-food business in the supermarkets, he has become the nearest thing we have to a completely informed, completely unbiased expert on the fundamentals of packaging that motivate the impulse purchase.

To get the benefit of this knowledge, we have turned for this month's lead-off article to the two leading organizations of rack jobbers—the American Rack Merchandisers Institute and the Toiletry Merchandisers Assn. To get the benefit for yourself, turn to "10 Seconds to Sell," starting on page 91 of this issue.

The Editors

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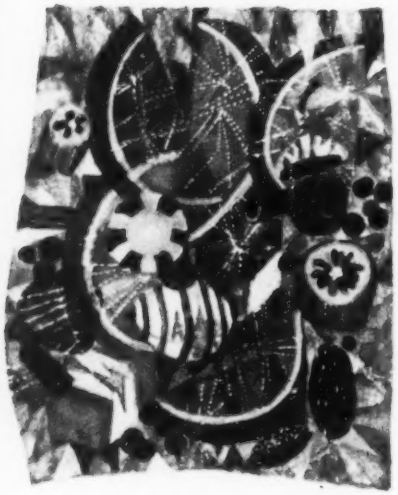
Most customers of the Maine Potato Bag Company insist on Dobeckmun polyethylene. H. N. Aldrich, Sales Manager, says: "None can compare with Dobeckmun. Most of all we like the printing and the quality of Dobeckmun's polyethylene bag."



Dobeckmun polyethylene wraps up a performance every time. This versatile, practical packaging film sells to the eye . . . promotes . . . protects. For teddy-bears and tablecloths, bonbons, bedspreads and poultry, too, its high gloss presents your product at its best, adds lustre to your brand name and selling message. Dobeckmun polyethylene is rigidly controlled from the basic resin to the finished bag to create the ultimate in transparency. Dobeckmun printing on polyethylene is unmatched. From the first idea to the actual printed polyethylene package, your product, with all its potentials—is packaged for performance by

The Dobeckmun Company, A Division of The Dow Chemical Company

Cleveland 1, Ohio; Berkeley 10, Calif. Offices in most principal cities.

Beautiful example of functional design

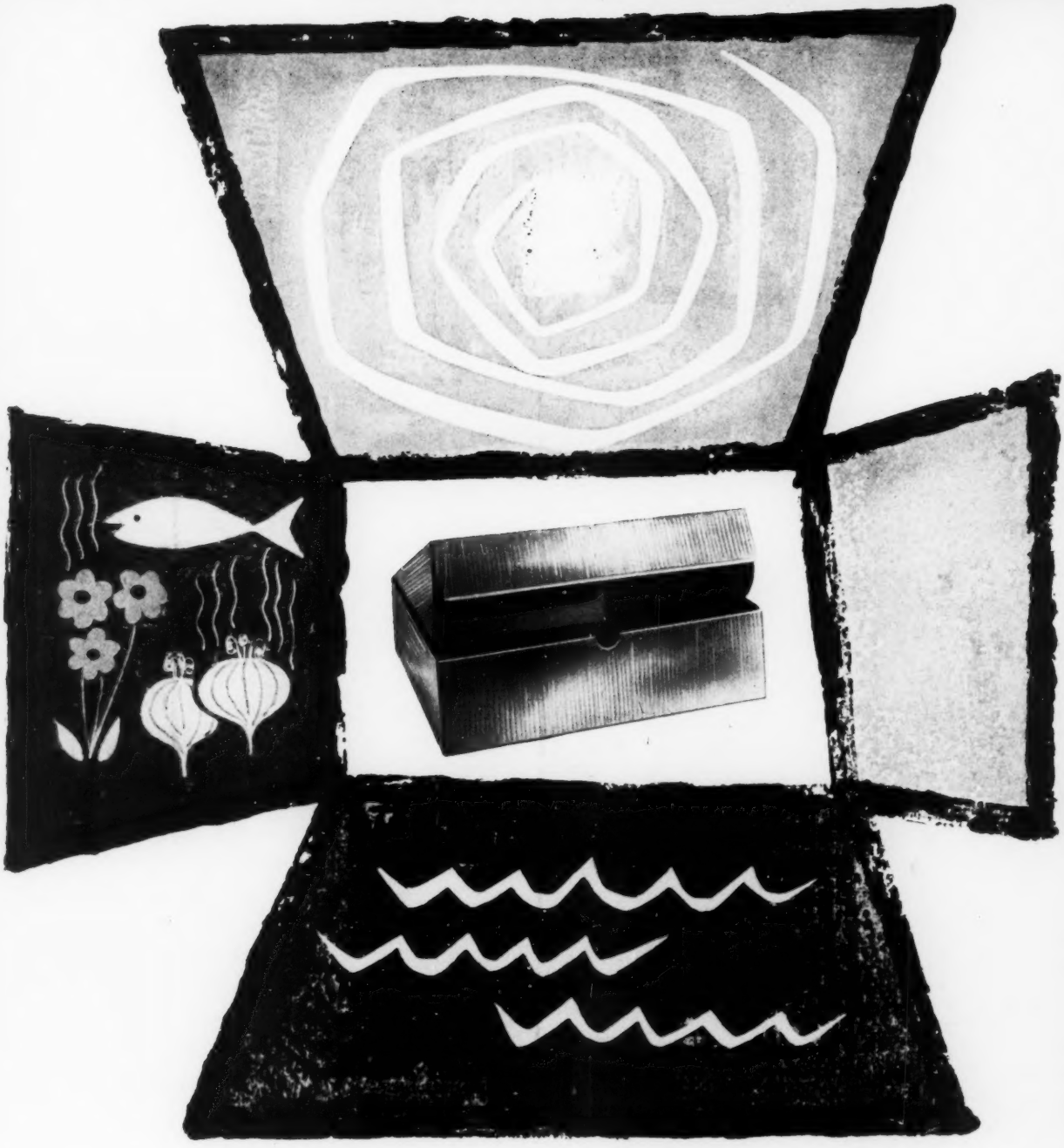
It's easy to see why this is an award-winning package. The clean, graceful design makes it a real eye-stopper.

Armstrong engineers have carefully translated the design into a package that functions perfectly . . . from the sparkling clear bottle to the handsome white molded cap.

For a single component, or the entire package, take advantage of the skills of our packaging specialists. Armstrong Cork Co., Lancaster, Pa.

Armstrong PACKAGING

WATCH ARMSTRONG CIRCLE THEATRE EVERY OTHER WEDNESDAY EVENING ON CBS-TV



Alcoa Foil in new corrugated boxes solves temperature and moisture control problems

These new boxes give up to 100% better refrigeration efficiency for shipping and storing all kinds of perishable foods and food products . . . reduce shipping weight, provide more shipping space by eliminating need for packing with ice.

With Alcoa Foil laminated on the outside, no moisture can get in. If your product must retain its moisture, foil lamination on the inside prevents seepage that would soak or weaken corrugated containers.

Contact Your Nearest Box Manufacturer—Alcoa doesn't make foil-laminated corrugated boxes, but will supply your present manufacturer, as well as work directly with him. To get further information, write for our booklet, "New Alcoa Foil in Corrugated Boxes." Simply fill in and mail the attached coupon.

ALCOA ALUMINUM
ALUMINUM COMPANY OF AMERICA

NEW! "ALCOA THEATRE" Exciting Adventure Alternate Monday Evenings

Aluminum Company of America
1649M Alcoa Building, Pittsburgh 19, Pa.

Please send me the name and address of the manufacturer of Alcoa Foil corrugated boxes who is located nearest to me, and also your booklet, "New Alcoa Foil in Corrugated Boxes."

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Street_____

City_____

State_____

Riegel

ONE OF THE OLDEST NAMES IN PROTECTIVE PACKAGING MATERIALS

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Now a NEW name in...

* PRINTED POLYETHYLENE FILM
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* MYLAR®-POLY EXTRUSIONS

(printed or plain)

Our new Indiana Plant has been equipped to specialize in the production of printed polyethylene film, and extrusions of polyethylene on cellophane and Mylar®. It will also produce most of the wide range of protective packaging materials made at our Milford (N.J.) Division.

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ENGINEERING

there's more in this can than your product

DESIGN

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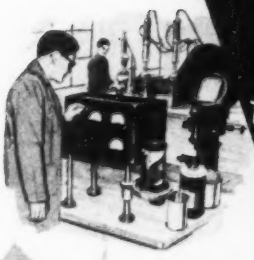
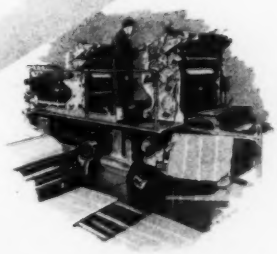


RESEARCH DEVELOPMENT



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PRODUCT RESEARCH

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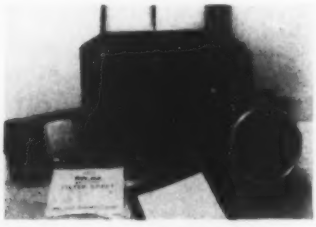
Researcher uses "Vapor Phase Chromatography" in GPI lab to define components of a chemical mixture.

Developed by SUN technicians, this "Evaporometer" is a uniquely sensitive balance that measures ink drying rates under various conditions.



"Fixt Flow Sampler" measures concentration of ink mist around press, aids in development of low-misting inks.

How creative research keeps GPI one step ahead in printing ink progress

There's a lot more in GPI printing inks than coloring matter and a vehicle to carry it. A lot more too than the practical press-side experience, the proud craftsmanship and the precise quality controls that GPI is known for.

There is also an invisible ingredient which means better printing performance for you today . . . fewer problems for you under tomorrow's conditions. This ingredient is the expanding program of dynamic creative research in GPI's technical laboratories.

The pictures on this page give only a glimpse of the modern scientific tools GPI uses to develop new and better inks for you. The real test of their value is in the results they deliver on your press. Why not give GPI inks a trial . . . soon.

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Long Island City 1, N. Y.

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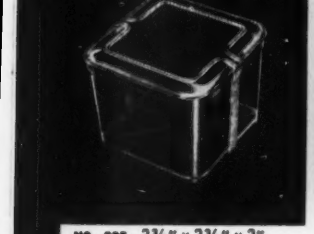
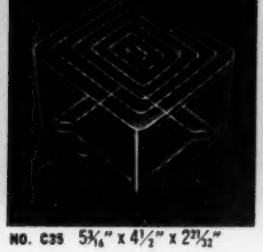
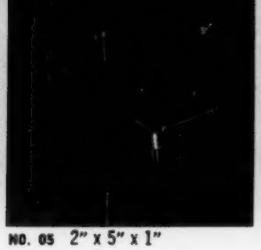


NO. 29F 3¾" x 3¾" x 3"

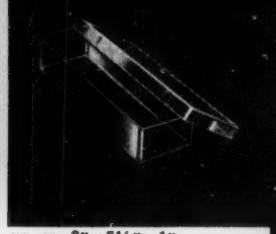
NO. 15F 3¹¹⁄₁₆" x 7½" x 3"



NO. C25 5¾" x 4½" x 2²³⁄₃₂"



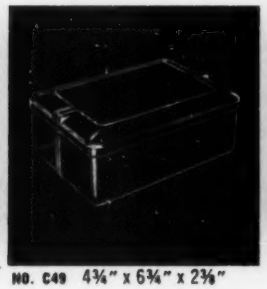
NO. 05 2" x 5" x 1"



NO. 07 2" x 5½" x 1"

looking for a square or oblong box?

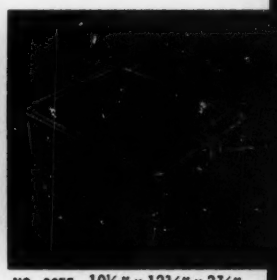
NO. C25 3¾₁₆" x 4¹¹⁄₁₆" x 2⅜"



NO. C49 4¾" x 6¾" x 2⅜"

NO. C79 5¼" x 7⅜" x 3¾"

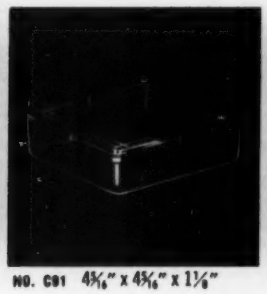
NO. 195F 7¹⁵⁄₁₆" x 10⅜" x 3¾"



NO. 395F 10¾" x 12⅜" x 3⅞"

TRI-STATE is your source for the world's largest assortment of

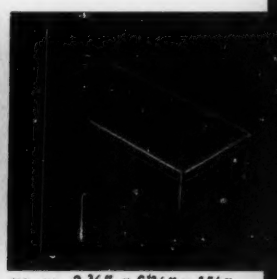
NO. 62 5" x 5¼" x 1¾₁₆"



NO. C91 4¾₁₆" x 4¾₁₆" x 1⅛"

NO. 160 2¾" x 8⅜" x 2⅜"

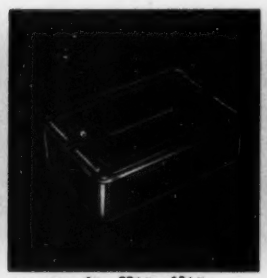
NO. 102F 4¹⁵⁄₁₆" x 2⅜" x 2¹⁵⁄₁₆"



NO. 82 3 ⅜₁₆" x 6¹³⁄₁₆" x 1⅜"

Rigid Plastic Boxes... all shapes and sizes

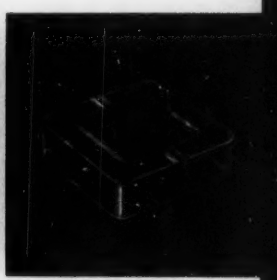
NO. 150 3" x 5¾" x 1¾₁₆"



NO. 30F 4" x 5¹⁵⁄₁₆" x 1¹⁵⁄₁₆"

NO. 06 2⅞" x 2⅞" x 1⅛"

NO. 155 4¾₁₆" x 4¾₁₆" x ¹¹⁄₁₆"



NO. 92F 4⅜" x 4⅜" x 1⅛"

TRI-STATE PLASTIC MOLDING CO. HENDERSON 6, KY.

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NOTE: *All dimensions are inside measurements*

More Holiday Spirits Shine and Sell

...IN REYNOLDS WRAP ALUMINUM PACKAGING!

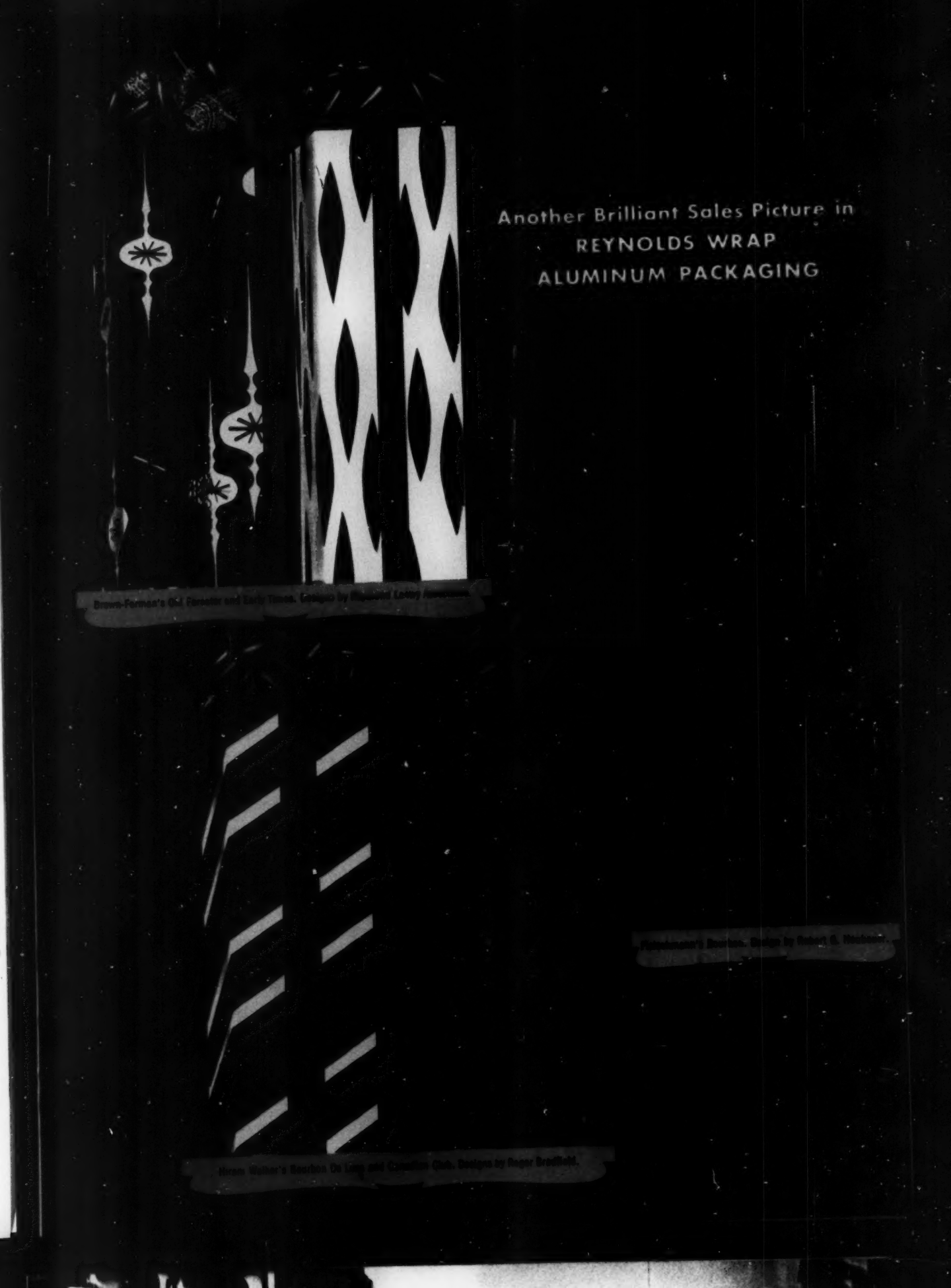
Wherever Quality needs Protection... use the Sales Power of this Seal!

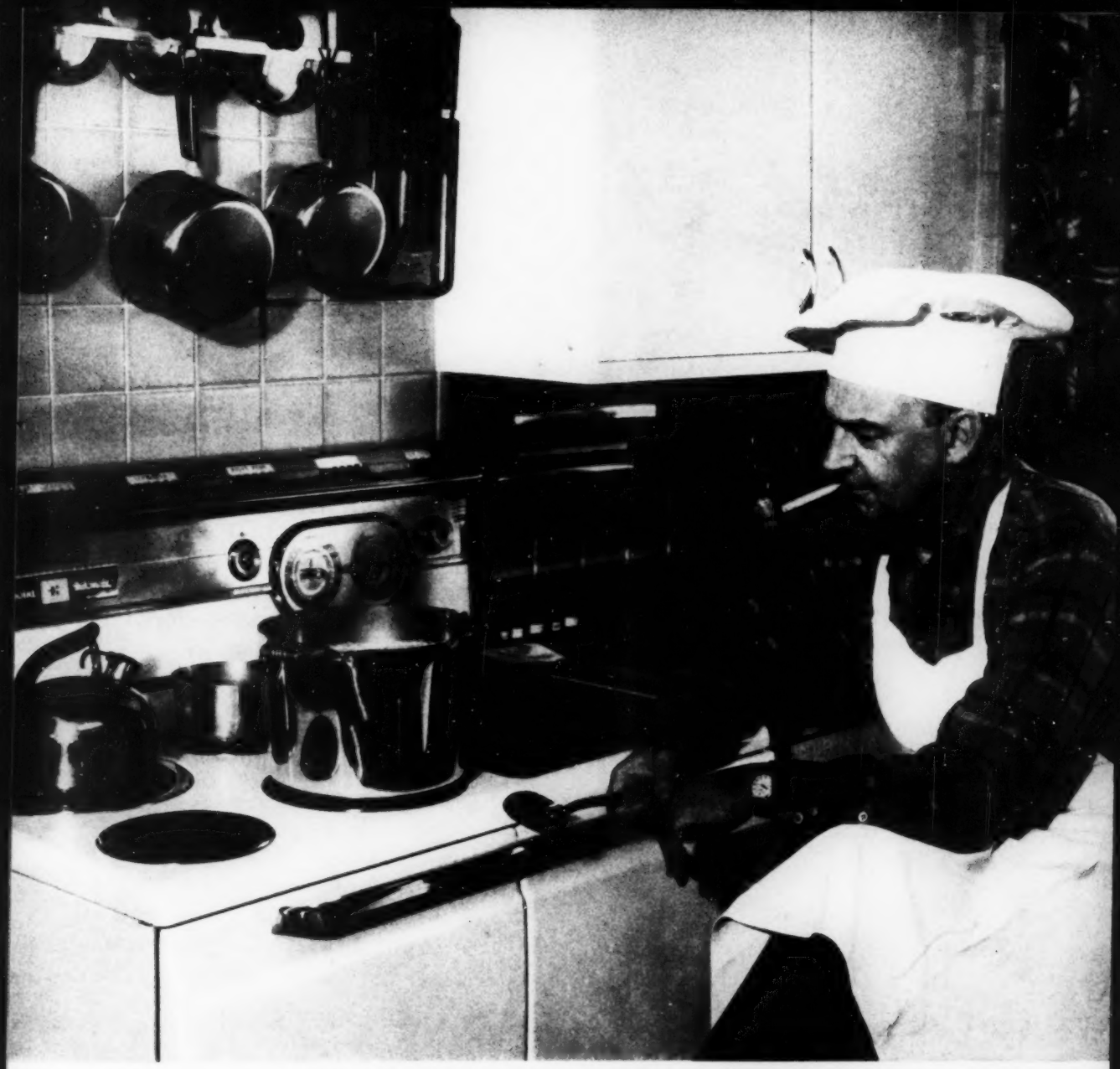
Recent independent survey shows 8 out of 10 women know this Seal... 9 out of 10 can mention where they saw it... 7 out of 10 prefer products carrying it! This is the result of powerful promotion — magazines, network TV, newspapers, spectaculars — plus millions of impressions on packages themselves. Take advantage of this proven sales power!

This Christmas, watch how the gala glow has spread... see how many more of these modern packages gleam on retail shelves. Success is its own best salesman... and Christmas '55, Christmas '56, amply proved the sales appeal of Reynolds Wrap Aluminum Packaging. These packages make handsome gifts worthy of quality brands. They use to maximum effect the beauty that only aluminum foil possesses... the brilliance of silver and gold, the gleam of metal through rich colors. Whatever your product, this beauty can add sales appeal. And if the product needs protection, too, you have unequalled advantages with Reynolds Wrap Aluminum packaging. Get the full details from any Reynolds Sales Office. Or write to **Reynolds Metals Company,** General Sales Office, Louisville 1, Kentucky.

REYNOLDS ALUMINUM

Watch Reynolds all-family television program "Disneyland", ABC-TV.


Another Brilliant Sales Picture in
REYNOLDS WRAP
ALUMINUM PACKAGING



who put the plastics in Mrs. Gibbs' chowder?

Visit Bob Gibbs at his home in Henderson, and you will most likely be invited to a typically delicious Kentucky dinner – prepared by Bob himself. He takes pride in his culinary efforts, with good reason.

Cooking is Bob Gibbs' favorite art – next to the plastic molding business. Since he developed the first crystal clear injection molded plastic box, over 15 years ago, many of his dynamic new packaging ideas have been inspired by his puttering about the kitchen. For a man around the kitchen gets to know just what a woman wants . . . plastic boxes that package with protection and offer years of diversified reuse.

If you have a new product (anything from macaroni to marbles to machine tools) or, if you need some package modernization, you'd be wise to consult with Bob Gibbs. He'll give you the recipe for the right plastics package in no time – functional, decorative, and undoubtedly consumer-tested. In a kitchen or injection molding plant, Gibbs may not have all the answers – but he sure has a lot of them.

Automation makes Gibbs rigid plastics cost less

GIBBS *Automatic Moulding Corporation*
Henderson 3, Kentucky

Self-sealing

PRESSEAL®

PATENT PENDING

cartons cut Kingan's packaging costs

Kingan's Meat in San Francisco has slashed packaging labor costs with phenomenal PRESSEAL, the carton that seals itself.

PRESSEAL carton flaps adhere to each other but to nothing else. The same easy motions that press the flaps closed also seal the carton for storage or shipment. No stapling, taping, or gluing equipment is needed, and no personnel is required to operate, maintain, or repair packaging equipment.

Using PRESSEAL, Kingan's Meat has speeded packaging operations and cut labor costs. So can you! If you're packing in a corrugated carton, you'll be packing better with PRESSEAL!

For Information on

PRESSEAL®

PATENT PENDING

Write to

GROWERS CONTAINER CORPORATION

PLANTS IN SALINAS AND FULLERTON, CALIFORNIA AND JACKSONVILLE, FLORIDA

HEADQUARTERS in SALINAS, CALIFORNIA
SALES OFFICES — CALIFORNIA: Salinas, Fullerton, San Francisco, San Jose, Santa Rosa, El Centro, Fresno • FLORIDA: Jacksonville, Tampa, Miami Springs, Orlando • ARIZONA: Phoenix • LOUISIANA: New Orleans • GEORGIA: Atlanta ILLINOIS: Chicago • ALABAMA: Birmingham • SOUTH CAROLINA: Greenville

EXCITEMENT!

that's the word for
Wrisley's
new, crystal-clear
Gaiety Bubble Bath packages
by CELLU-CRAFT

FIRST AWARD!
1957 NATIONAL FLEXIBLE PACKAGING COMPETITION
Pharmaceuticals, Drugs, Cosmetics & Chemicals Classification.

PROBLEM: WRISLEY needed a package that would: a) protect the fragrance and texture of its bubble bath powder; and, b) sparkle with eye-attracting sales appeal.

SOLUTION: Call in Cellu-Craft to develop the package.

RESULT: Excellent protection of product achieved by careful selection and treatment of the proper film. *Permanently* sparkling colors were achieved with special inks, specially treated.

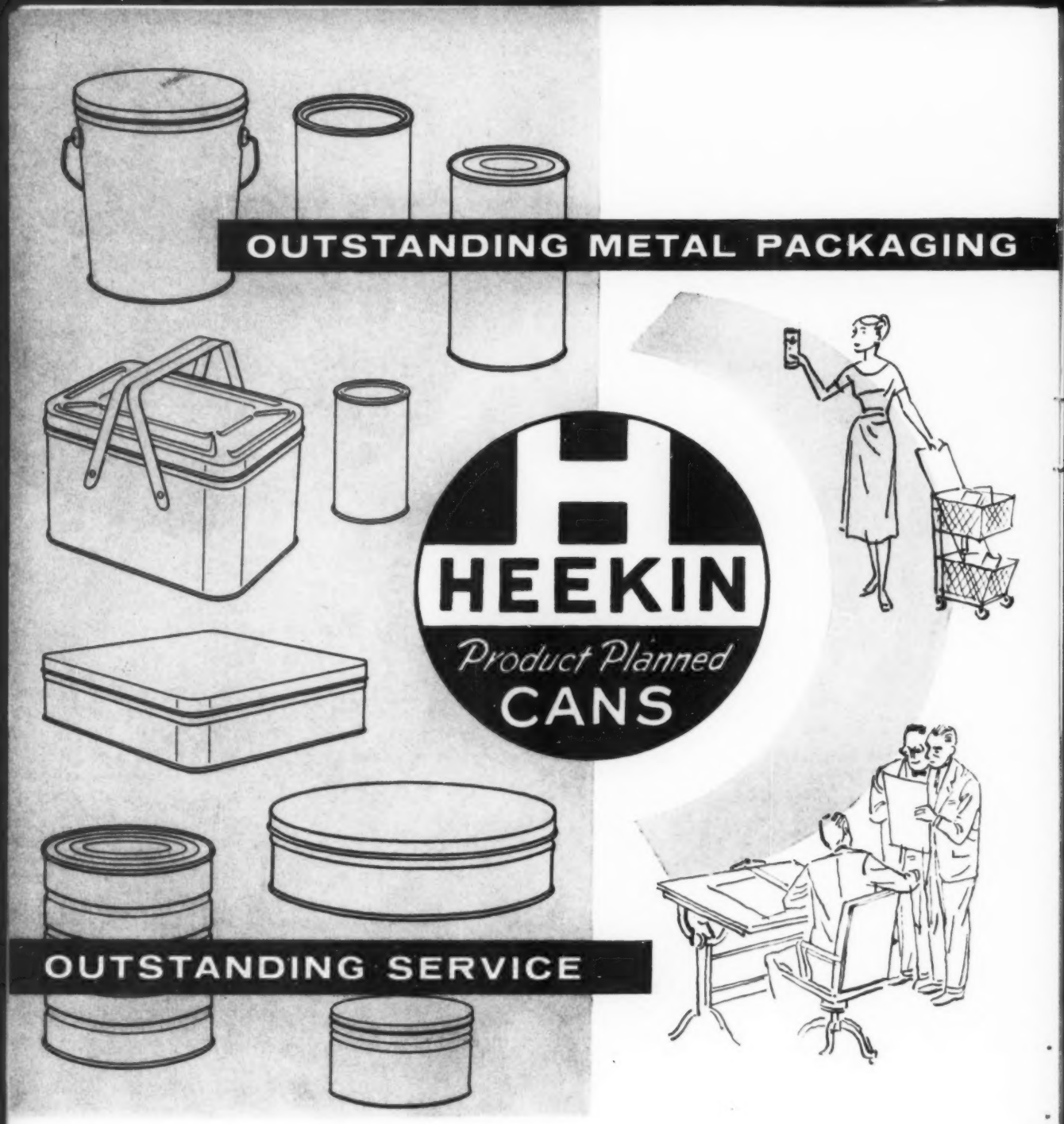
RECOMMENDED: You're in the best company when you put Cellu-Craft package development engineers to work for your firm . . . your products . . . and watch sales grow.

CELLU-CRAFT
PRODUCTS CORPORATION

Designers, Converters and Color Printers of Flexible Packaging Materials

General Offices & Plant: **1401 4th AVE., NEW HYDE PARK, N.Y., PRIMROSE 5-8000** *Sales Offices in principal cities*

PRINTED CELLOPHANE • POLYETHYLENE • PLIOFILM • FOIL • ACETATE • in ROLLS • BAGS • POUCHES • ENVELOPES • SHEETS



The use of Heekin Product Planned Cans . . . lithographed or plain . . .
for your products makes your business an integral part of Heekin.
In its fifty-six years Heekin has served thousands of customers . . .
in every field of merchandising. We acknowledge no superior in the production
of metal cans . . . in personal service . . . in creative ability . . .
and in economic and merchandising co-operation.

Let Heekin Product Planned Cans work for you.

THE HEEKIN CAN CO. *PLANTS IN OHIO, TENNESSEE & ARKANSAS—SALES OFFICES; CINCINNATI, OHIO; SPRINGDALE, ARKANSAS*

How TUMS tamed a sharp corner

Tums arrive at the dealer's in three-carton bundles, containing 36 rolls in all.

A transparent overwrap was desired to provide immediate identification and carton protection as well as bundling—but the weight and sharp corners of Tums cartons played havoc with ordinary films.

Split and broken bundles were frequent during the trip from factory to warehouse, to distributor, to dealer.

Then VITAFILM was tried *and the cure was found.*

RESULT? Clean, tight, positive-sealed cartons of Tums. Practically no ripping or splitting to mar the appearance or effectiveness of Tums merchandising. *And downright wonderful machinability on high-speed automatic packaging equipment!*

What with the new low cost of VITAFILM—that prices it even lower than some ordinary films—isn't it time you investigated the great performance it can turn in for YOU? Call in the Goodyear Packaging Engineer for the facts. WRITE: Goodyear, Packaging Films Dept. L-6118, Akron 16, Ohio.

TUMS—T. M. Lewis Howe Co., St. Louis, Mo.

Watch "Goodyear Theater" on TV—every other Monday 9:30 P. M., E. S. T.

Vitafilm

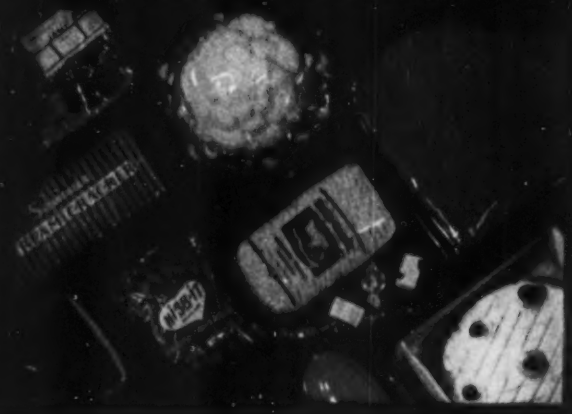
The finest in sheer protection

a new GOODYEAR PACKAGING FILM

Vitafilm, a Polyvinyl chloride — T. M. The Goodyear Tire & Rubber Company, Akron, Ohio

These goods sell on sight . . .

in CELLOPHANE*



B.C.L.
in POLYTHENE

in ACETATE

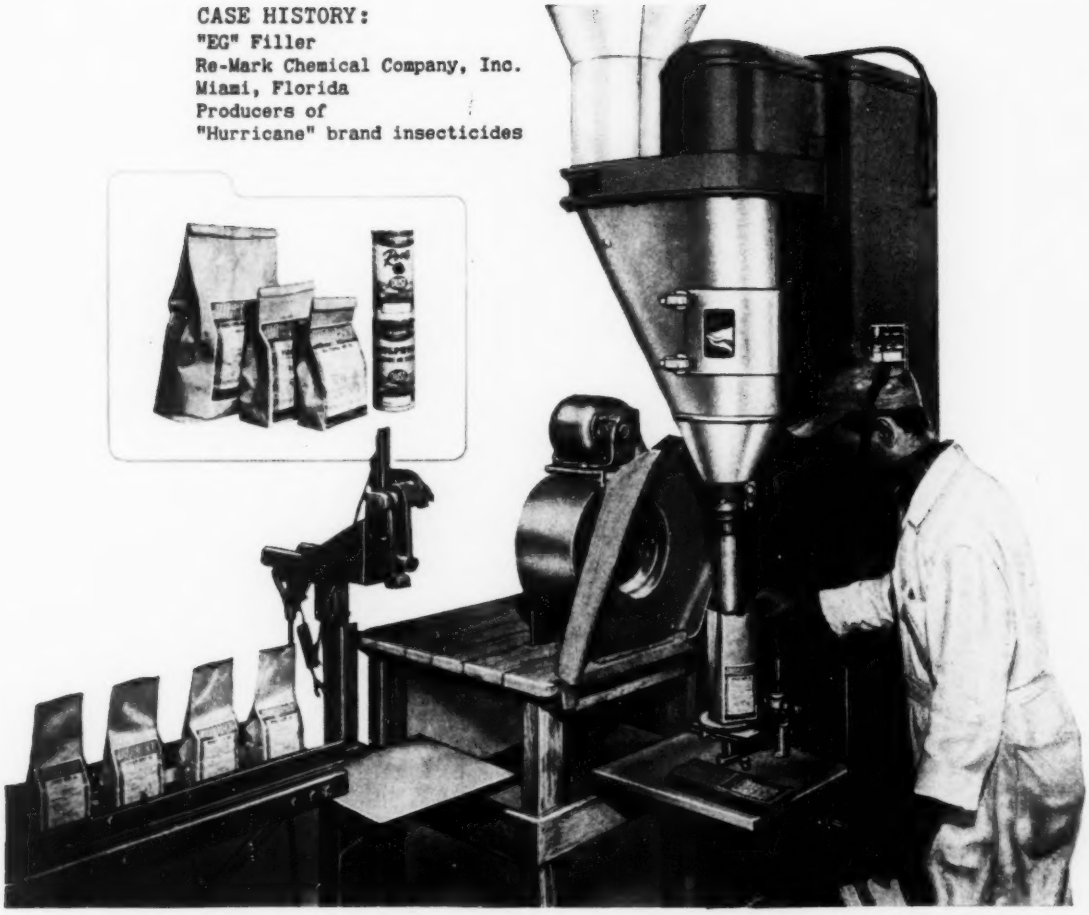
BRITISH CELLOPHANE LIMITED

SPECIALISTS IN FLEXIBLE TRANSPARENT PACKAGING MATERIALS

Commercial Offices: 12-13, CONDUIT STREET, LONDON, W.1. ENGLAND

*CELLOPHANE is the registered trade mark of British Cellophane Limited, in the following countries: Great Britain, Australia, Ceylon, Cyprus, Denmark, Eire, Gibraltar, Hong Kong, Iceland, India, Jamaica, New Zealand, Pakistan, Southern Rhodesia, Southern Rhodesia, Trinidad and Tobago, and the Union of S. Africa

CASE HISTORY:
"EG" Filler
Re-Mark Chemical Company, Inc.
Miami, Florida
Producers of
"Hurricane" brand insecticides



Packaging costs *Slashed* on both long runs and rush orders

"We have obtained improved production from the Stokes & Smith "EG" Filler and it has substantially reduced our costs of packaging insecticides," reports Mr. Paul Marks, the president of Re-Mark Chemical Co.

"It is very versatile. We can change from one type of packaging to another with little delay. It is excellent for long runs and equally good for filling rush orders. I know of no other equipment so accurate and easy to handle or so well suited to our needs."

Because dust insecticides are non-free flowing, the "EG" auger principle provides the distinct advantage of extreme accuracy and speed in filling both bags and canisters in from one to ten pound packages. The filler operates from 5 to 18 hours a day and occasionally is put on a 24-hour, three-shift day without maintenance stops.

Filling is changed as often as five times a day for different products and package sizes. And because of the "EG" Filler's speed and quick changeover, it has not been necessary to warehouse large stocks since rush orders can be handled economically.

Why not discover how the versatile "EG" Filler can cut your packaging costs? Write to:

STOKES & SMITH CO.

4904-D SUMMERDALE AVENUE, PHILADELPHIA 24, PA.

Pacific Coast: SIMPLEX PACKAGING MACHINERY, INC., 534—23rd AVE., OAKLAND 6, CALIF.

SUBSIDIARY OF FOOD MACHINERY AND CHEMICAL CORPORATION

THE VALVE'S THE THING

* Whatever type of product you are now packaging or planning to package in aerosol containers, top it off with a Precision Valve.

Our wide experience and modern manufacturing facilities with the best production machinery, offer the most complete line of valves for the widest range of product formulations.

The aerosol packager is aware that the pressurized container is a new horizon, a new dimension in packaging and merchandising. The latest count approaches nearly 1000 different uses for aerosols, paints, cleaners, pharmaceuticals, foods, cosmetics, etc.

We, at Precision, are justifiably proud of the record our valves have made, made in the hands of millions of users.

Precision, the world's largest aerosol valve manufacturer, is at your service.

Keep abreast of the best in packaging... watch for the Precision advertisements foretelling tomorrow's container news!

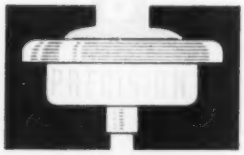
Chocolate
Coffee
Tea
Toppings
Batters
Catsup
Syrups

Waxes
Cleaners
Detergents
Hand Lotions
Dental Creams
Hair Dressings
Shampoos
Shaving Soaps

Wonderful way to Package ...for any

NON-AERATED LIQUID STREAM

A STREAM DISPENSER that operates at the touch of a finger. It's non-aerated and it maintains an hermetic seal on the container contents. Normally reactive volatile or oxidizable products can be kept for long periods of time without refrigeration... kept exactly as they were packaged. This makes an ideal container for foods, toiletries and household helps. Ideal because the contents remain unchanged after packaging. Ideal because it is an eye-appealing and easy to use package that has proven sales motivation.



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liquid or semi-liquid product -Precision's new valve and spout

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Eye Drops

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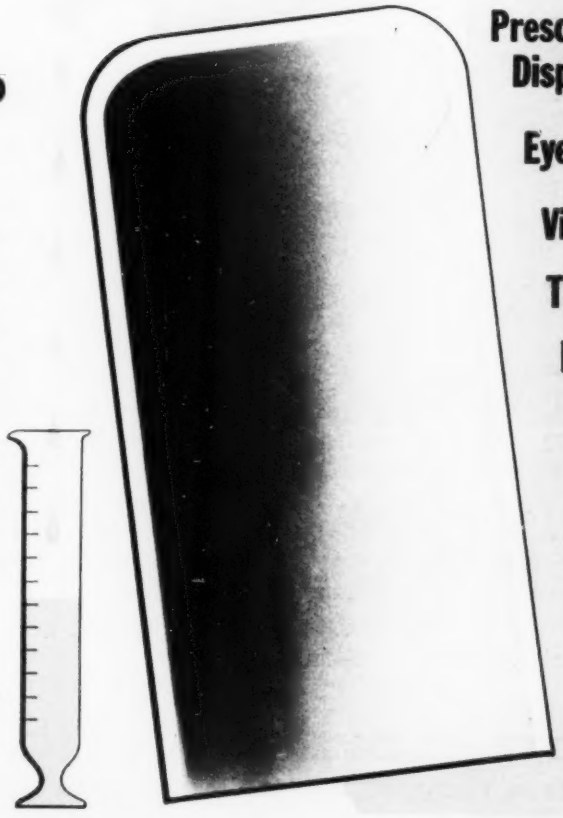
Tabasco

Bitters

Nose Drops

DROPS MEASURED TO SIZE

A DROP DISPENSER that operates at the touch of a finger to give a predetermined drop size, exact enough to dispense drugs or vitamins. An ideal dispenser of volatile products, many medicinals or oxidizable vitamins and extracts. The inert propellant does not effect the contents either physically or chemically. Thanks to Precision, you can now take advantage of this most modern and effective packaging container. Precision's engineers will be most happy to discuss your product and your product problems . . . a letter will bring you complete details. Why not write today!



700 Nepperhan Avenue, Yonkers, N.Y.

Hamilton new 501 bodymakers are in service at many well-known plants

Installations pictured above, Hershey Chocolate, Hershey, Pa. (top); Sherwin-Williams, Oakland, Calif. (lower left); and Dole Pineapple Honolulu, indicate how leading packers have chosen Hamilton's new 501 Bodymaker to meet can requirements efficiently.

The main feature of Hamilton's new No. 501 Bodymaker is its central drive shaft. This unusual design results in fewer wearing parts and gears and improved accessibility.

Write today for a descriptive bulletin of the world's most complete line of can making machinery.

Hamilton Division Hamilton, Ohio

BALDWIN · LIMA · HAMILTON

Diesel engines • Mechanical and hydraulic presses • Can making machinery • Machine tools

COLORS PACKED IN 4-PART POUCH
Added to Glass Wax, colors will spark Gold Seal's profitable stencil idea for Hallowe'en, Christmas
GOLD SEAL
GLASS WAX
Wonder-Earth

Sensational PROMOTION by Gold Seal

Dependable POLY-LOK® Pouches by Oneida

When Gold Seal Company (Glass Wax) decided to follow up its previous tremendously successful Christmas window stencil promotion with a new Hallowe'en and Christmas Stencil "package", they picked 30/200 Poly-Lok (polyethylene-coated cellophane), as the ideal pouch material most likely to carry the liquid dyes safely without leak.

Oneida specialists worked closely with Gold Seal and Acepak, Inc., the company that handled the packaging, to develop the right package.

Oneida is ready to do the same for any manufacturer who has a liquid or semi-liquid product to package.

Poly-Lok is a true, permanently fused, coated film, not a laminate. It is printed *before* coating, so that colors remain permanently bright.

Send for sample pouches or sheets. And if you have a current flexible packaging problem . . . we'd be happy to talk it over with you.

Oneida PAPER PRODUCTS, INC.

10 Clifton Blvd., Clifton, N. J.

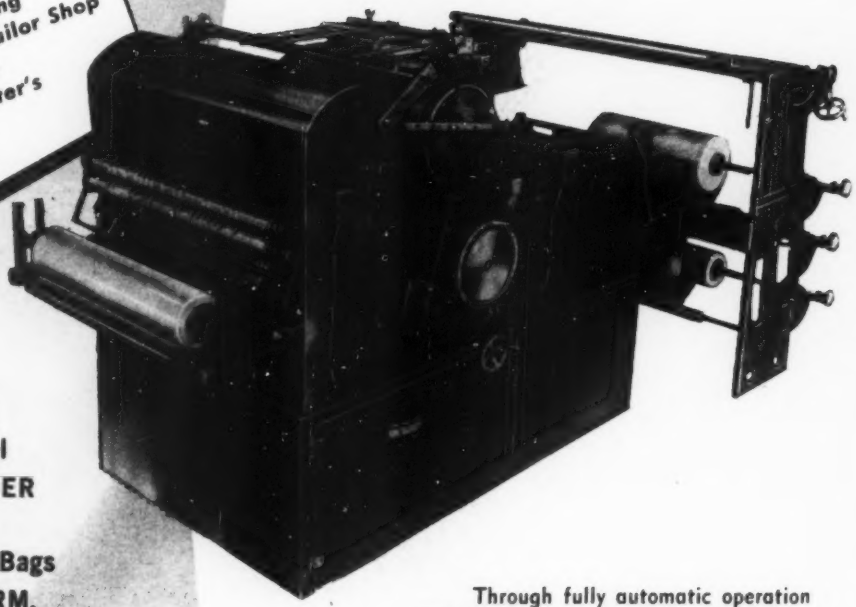
Los Angeles, Cal. • Baltimore, Md. • Centralia, Ill. • Sales Offices in Principal Cities

CONVERTERS AND COLOR PRINTERS OF QUALITY PACKAGING from: Glassine, Cellophane, Polyethylene, Vinyls, Parchment, Sulphite, Foil, Kraft, Waxed, Coated and Laminated Materials.

Completely Automatic GARMENT BAGS!

THE Roto Bag PO-5 "SPECIAL"

Takes Bag Making Out of the Tailor Shop — Returns It to the Converter's Plant!



Delivers Individual SLOPE-SHOULDER Garment Bags Or Perforated Bags In ROLL FORM.

- **Bags in roll form eliminate cumbersome handling of light, limp material both in-plant and by end-user.**
- **Handles light gauges down to and including .000625.**
- **Performs all the functions of a standard PO-5 for making conventional bags.**

Through fully automatic operation and elimination of costly handling procedures with improvised equipment the Roto Bag PO-5 "Special" lowers the cost barrier to a point where the enormous tonnage of the garment bag market is available to polyethylene!

Adding a rewind delivery to this fast, completely automatic machine enables the converter to efficiently produce garment bags from low-cost, light gauge poly and to sell these printed and unprinted bags in roll form. Moreover, the rolls lend themselves to especially adapted dispensers which greatly simplify handling for the end-user.

For specifications on this machine and details regarding roll dispensers, write:

ROTO BAG MACHINE CORP.

SALES AGENT

CONAPAC CORPORATION

120 East 13th Street, New York 3, N. Y.

Clear heads agree: Calvert will wrap up bigger holiday business with its "FACIL-FAB" LUSTREWRAP!

There's a colorful "cover story" behind the spirited selling of Calvert Reserve. It began many months ago on a designer's drawing board. And it is now being written in soaring holiday sales figures all over America—due to the enthusiastic response to the satin fabric texture and shimmering beauty of Calvert's special "FACIL-FAB" LUSTREWRAP. Your packaging needs can be served just as profitably by the creative packaging skills and flexible production facilities of FACILE CORPORATION.

Let's put our heads together now — and start thinking about an equally successful solution to your packaging needs!

FACILE CORPORATION

Paterson 4, New Jersey Tel. MUlberry 4-1000

facil-fab
Laminated Products

Your packaging showmanship begins at Dow

pack it with sell in SARAN WRAP

Proud of your product? Then give it the *sell* it deserves . . . in packaging that underscores its quality. Protect it . . . show it off in crystal-clear Saran Wrap*.

Here is the flexible packaging that is setting new standards of protection. And it's providing that sparkling look of freshness . . . the look that tempts shoppers and clinches sales. Saran Wrap is satin soft, yet tough enough to keep your packages in excellent shape even on self-service counters.

Switch now! Begin with a call on Dow Packaging Service to help you plan the *sell* in your package. And be sure to identify your packages with the Saran Wrap hallmark of protection.

**Trademark of The Dow Chemical Company*

pack it with sell in **STYRON**

Some products naturally call for rigid containers. If yours do . . . it's time you called for Styron®.

Plastic containers made of Styron are lifting hundreds of fine products out of the humdrum and right into America's shopping bags. Whether you package fishing lures or pharmaceuticals, let Dow Packaging Service help you find the plastic container that can pack your product with sell.

Opaque, crystal clear, gorgeous colors . . . standard or novelty shapes and sizes . . . imprinted or ready for your label. They're all yours to choose from in plastic containers made of Styron. Write today to THE DOW CHEMICAL COMPANY, Midland, Michigan, Packaging Service PS-1516E-1.

The Dow Chemical Company does not fabricate finished packages, but rather is a raw material supplier to leading manufacturers.

YOU CAN DEPEND ON

DOW

THE JOHN DALE GROUP for quality and service

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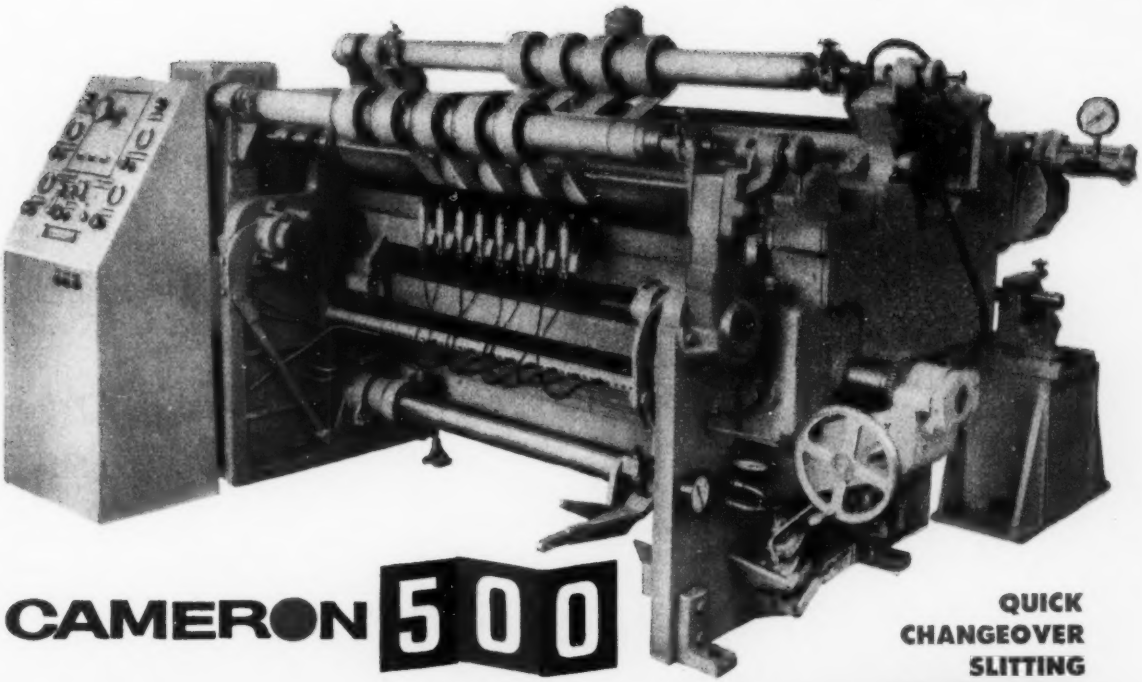


CAMERON 500

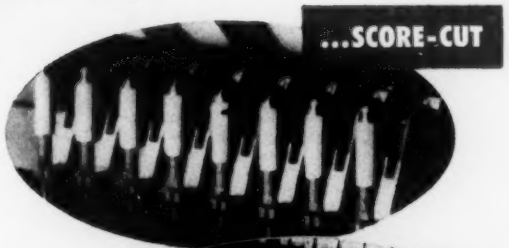
QUICK CHANGEOVER SLITTING

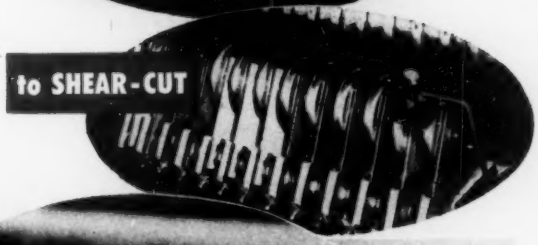
VERSATILITY FOR HANDLING ALL TYPES OF FILMS, FOILS, PAPERS AND LAMINATES...

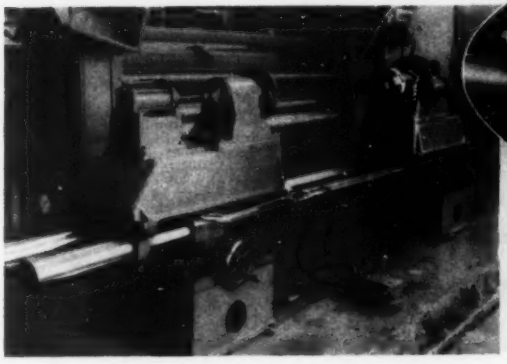
For the first time in one machine Cameron 500 combines shear-cut, pneumatic score-cut, and razor-type slitting. Instant changeover adapts the 500 to the slitting method best suited to various materials. Cameron Sealcut® slitting units may also be used for heat sealing the strip edges of fusible fabrics and plastics. Speeds up to 2000 fpm*. Widths up to 62". Rewound roll diameters up to 20". Write, wire or telephone for complete information on Cameron 500.

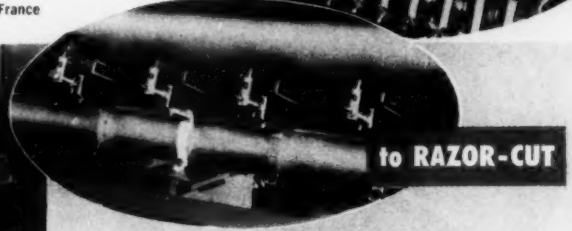
*Speed depends on width, number of cuts and characteristics of material.

Cameron Machine Company, Franklin Road, Dover, N. J.
Canada: Cameron Machine Co. of Canada, Ltd., Royal Bank Bldg., Toronto 1
France: Batignolles-Chatillon, 5 Rue De Monttessuy, Paris (7e) France









Also available...oscillating razor-cut...saves over 50% in cutter blade maintenance and replacement costs.

◀ **NEW CAMERON SHAFTLESS BACKSTAND (optional).** Adjusts easily and quickly to parent rolls of various widths of any material. Minimizes downtime between roll changes.

SEE OTHER EXCLUSIVE FEATURES! SEND FOR BULLETIN 1050

BUILT BY CAMERON'S team of specialists

50 years devoted exclusively to the design and manufacture of slitting and roll winding equipment.

AA-342

SELECT SEALED CARTON BELOW
FOR QUICK SERVICE-SELECT SEALED CARTON BELOW-TAKE TO CASH
Frying Pan
Frying Pan
Frying Pan
Cooker
DEEP FRYER COOKER
DEEP FRYING COOKER
First Prize for surface design and printing in the recent Fourth Annual Fibre Box Association Competition was awarded to Gaylord

BOXES THAT NEVER STOP SELLING FOR YOU

Gaylord Boxes

Take this fresh look at your boxes: do they excite sales action for your customers? Do they project your trademark, stress product features, clinch sales? Let Gaylord specialists in design and printing go to work. They transform "just boxes" into active sales-builders. They do it for others—can do the same for you.

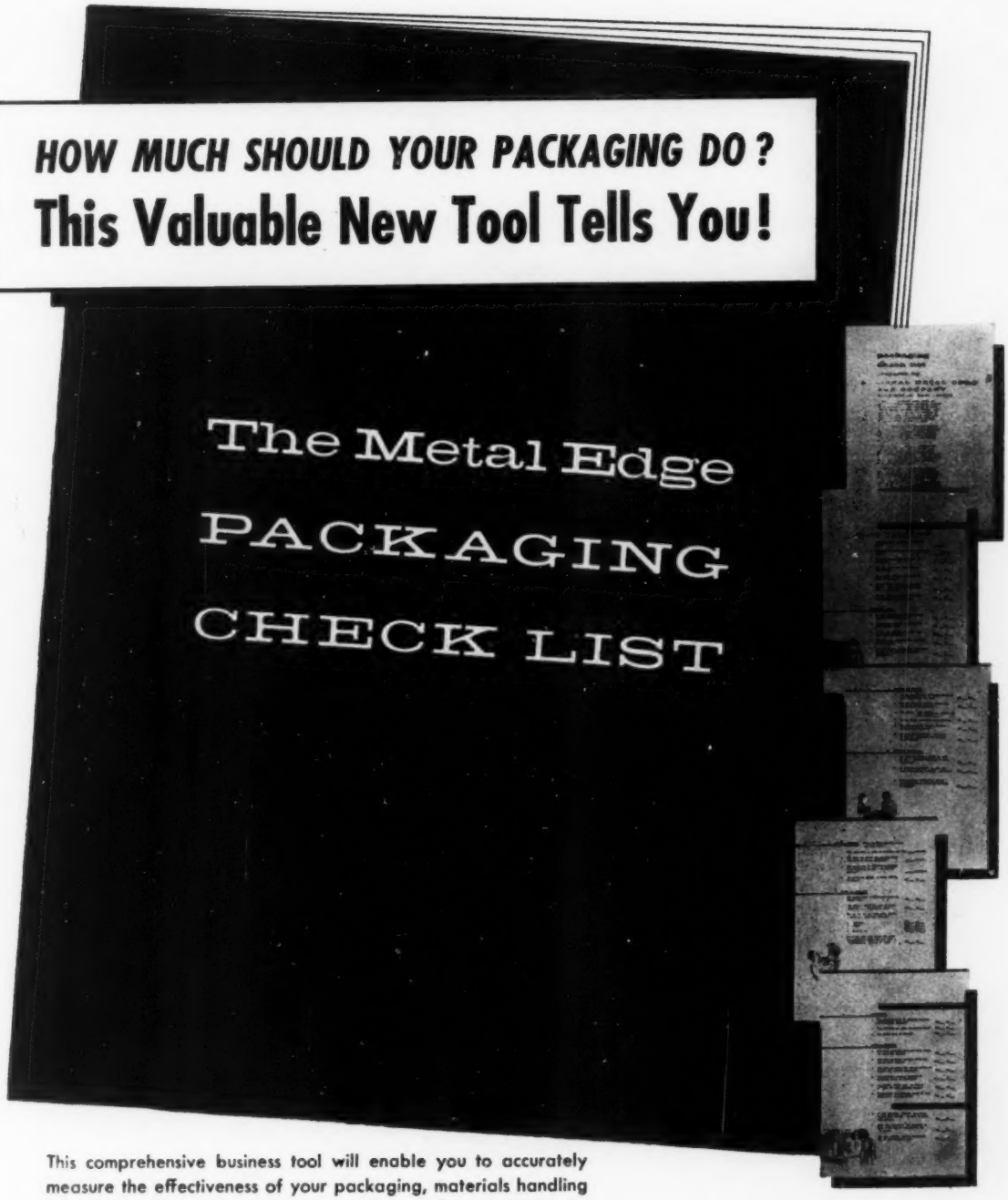
Call your nearby Gaylord packaging engineer to get things rolling.

CORRUGATED AND SOLID FIBRE BOXES • FOLDING CARTONS • KRAFT PAPER AND SPECIALTIES • KRAFT BAGS AND SACKS

GAYLORD CONTAINER CORPORATION ★ ST. LOUIS

HOW MUCH SHOULD YOUR PACKAGING DO?

This Valuable New Tool Tells You!



This comprehensive business tool will enable you to accurately measure the effectiveness of your packaging, materials handling and inventory control programs . . . and to implement cost-cutting improvements!

NATIONAL
METAL EDGE BOX
COMPANY

Barrington, New Jersey

Packaging, Materials Handling, Inventory Control Engineered to Specific User Needs For the Leaders in over 100 Industries.

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National Metal Edge Box Co.
60 Gloucester Road, Barrington, N.J.

Gentlemen:

Please send me your "Packaging Check List". I understand there is no cost or obligation.

Name_____

Position_____

Company_____

Address_____

City_____ Zone____ State_____

"The extra rigidity of 'Poly-Eth Hi-D' met our needs so well that we placed a new order within 30 days," declares Vernon Furlow of Amarillo, Texas. Inset shows the sturdy but stylish squeeze bottle now being used to package his product, Melrose Shampoo. Container is made by Imco Container Corp.

A Leading Manufacturer Reports —

"How 'Poly-Eth Hi-D' Succeeded Where Conventional Polyethylenes Failed:"

Extra rigidity of "Hi-D" results in container that is sturdier, yet attractive, and protects product better . . .

"Because of a special ingredient in our product, Melrose Shampoo," explains manufacturer Vernon Furlow, "containers made of conventional polyethylene collapsed or distorted."

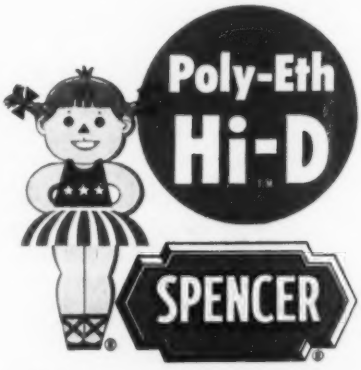
"Also besides greater stiffness, we wanted a container with a more stylish-looking surface, and one that could be decorated attractively. We investigated a number of materials. Finally we consulted Spencer Chemical Company and learned about the unique benefits of 'Poly-Eth Hi-D.' The Imco Container Corporation of Kansas City prepared a sample set of containers made of 'Hi-D.' Since then we've never used anything else."

You can actually boil food in film made from test-proven "Poly-Eth Hi-D". "Hi-D" has the clarity and gloss of high-pressure polyethylene.

" 'Hi-D' has all the features we need for our containers. Also, it never shrinks—standard caps always fit. Best of all, it has such low permeability that it gives our product much better protection."

"Poly-Eth Hi-D" solves many other packaging needs, too. In Spencer's laboratories, it has been tested many times as a film bag for boiling food. And unlike other boilable see-through plastics, "Poly-Eth Hi-D" can be heat-sealed.

The extra benefits of "Poly-Eth Hi-D" may also offer a perfect solution to *your* packaging problems. Only Spencer offers you commercial quantities of this new polyethylene. For more information, contact your nearest Spencer sales representative, or write to Spencer Chemical Company for a "Poly-Eth Hi-D" data sheet.



Dwight Bldg., Kansas City 5, Mo.
SPENCER CHEMICAL COMPANY

365 DAYS
give you
365 WAYS
to shift into
HARD SELL
with
ABLE LABEL!

Our new embossed calendar on metallic foil is our way of reminding you that every day of the year requires dynamic promotion if you want to stay ahead of competition.

Top organizations agree that the continuing and intelligent use of labels at point-of-sale is one of the easiest, fastest, cheapest and most effective dollar producing ways to shift their program into high gear.

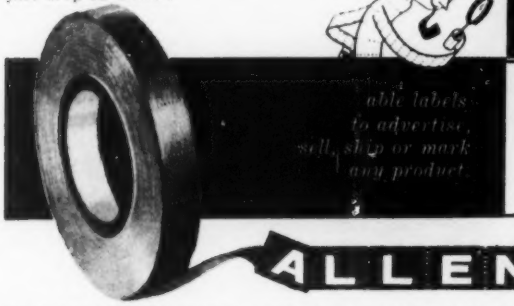
Special pricing, banding, product changes, "after-thoughts" and special legal requirements can all help sell when labels tell the story.

One of the most effective of unmeasured media, ABLE LABELS sell as well as tell for you in only fractions of inches!

An ABLE-STIK (pressure sensitive) label requires no water, no glue, no heat. Just remove backing, press in place on almost any smooth, dry surface and it will STIK! Automatic dispensers are available for high speed mass labeling.

TEST IT! Just Peel and Press.

If you would like copies of this calendar for personal use or a similar calendar for distribution embossed with your own name or trade mark, just drop us a note.



CLIP or WRITE for

- ☐ FIFTEEN CASE STUDIES—showing interesting uses of pressure-sensitive labels.
- ☐ THE "ABLE LABELER"—a quarterly news letter of fresh ideas.
- ☐ HISTORY OF LABELS—by Stanley C Hollander, PhD., U. of Minnesota
- ☐ AUTOMATION — LABELATION — saving time and money with labels and office machines.
- ☐ HARD SELL CHECK LIST—simple, inexpensive approaches to getting the jump on competition.

ALLEN HOLLANDER CO.

Dept. MP 385 Gerard Avenue, New York 51, N.Y. Mott Haven 5-1818 Sales Offices: Boston Detroit Philadelphia

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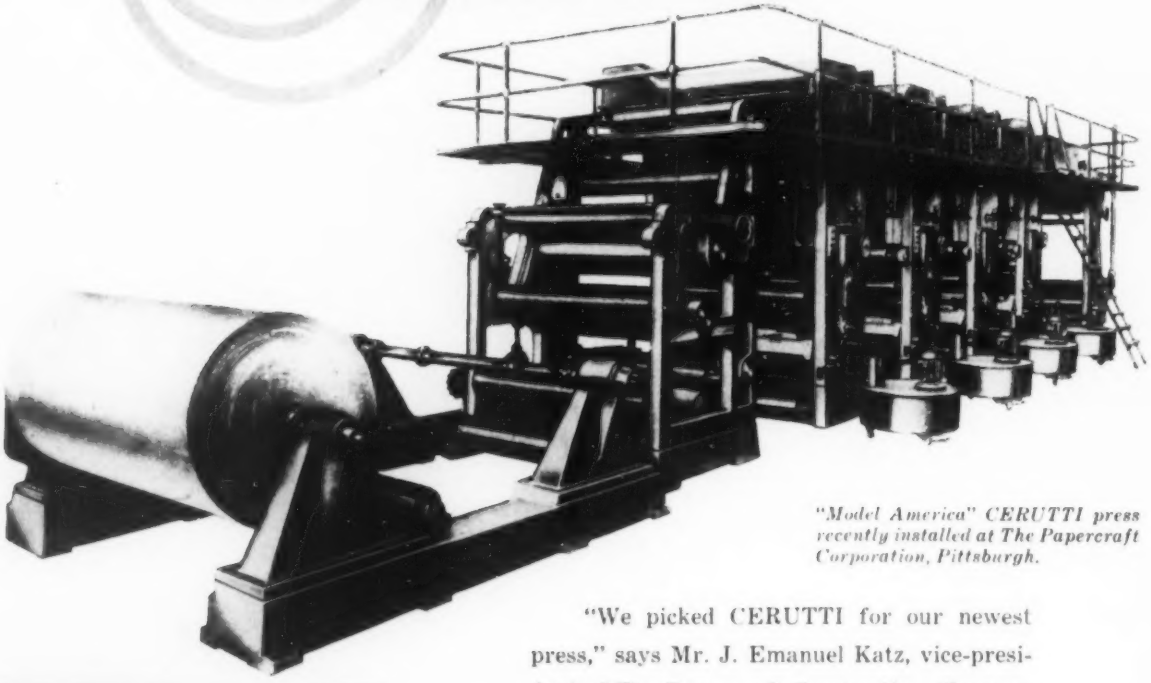
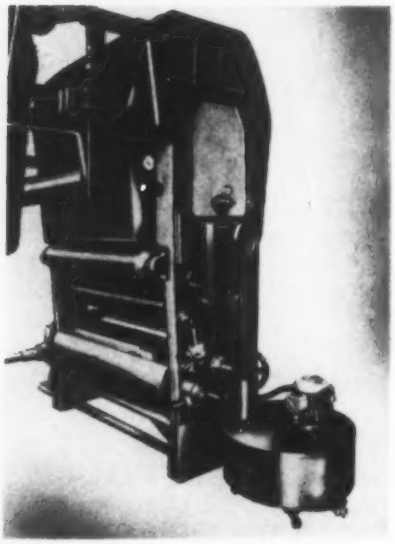
At The Papercraft Corporation it's

CERUTTI ROTOGRAVURE



"Model America" CERUTTI press recently installed at The Papercraft Corporation, Pittsburgh.



"We picked CERUTTI for our newest press," says Mr. J. Emanuel Katz, vice-president of The Papercraft Corporation, "because we are convinced it can meet our tough standards of quality and production." Custom-built to its owner's specifications, Papercraft's "Model America" CERUTTI is being used for printing fine gift wraps of paper, foil and cellophane. A 4-color 44" press that incorporates many desirable functional and design features, it is equipped with flexographic conversion unit, dual-roll unwind and duplex rewind.

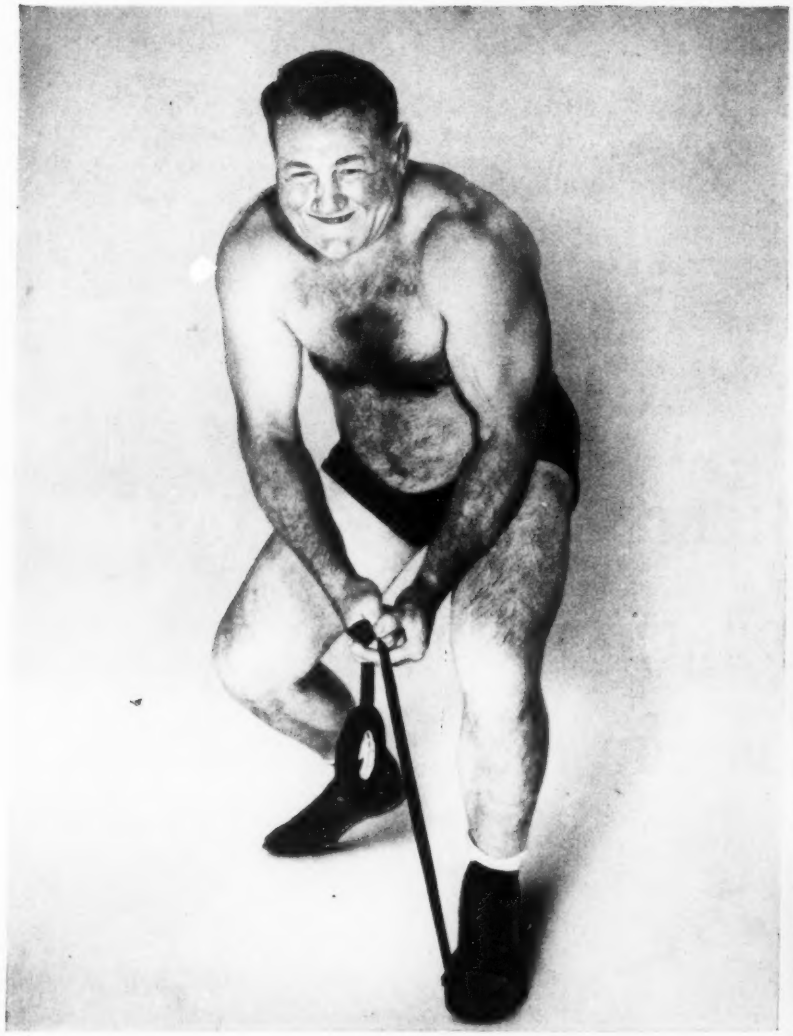
The "Model America" Rotogravure Press is one of five different CERUTTI models for every printing need. Why not get in touch with *Parsons & Whittemore* now and learn why CERUTTI is today's choice of knowing gravure press buyers.

PARSONS & WHITTEMORE *Graphic Corporation*

A wholly-owned subsidiary of Parsons & Whittemore Inc.

250 PARK AVENUE • NEW YORK 17, N. Y.

In Canada: Manton Bros. Ltd., Toronto



World's strongest tape?

Even wrestler Bronko Nagurski can't break it! "SCOTCH" Brand Filament Tape is amazingly strong, super shock-resistant. Thousands of filaments imbedded in the pressure-sensitive adhesive give it up to 500 lbs. tensile strength per inch of width. Four colors: Red, Blue, Black, White and Transparent. Ask your regular tape distributor how you can use it for heavy-duty packaging, or write us direct. Always specify "SCOTCH" Brand, the *quality* tape . . . and *stick* with it!

FILAMENT TAPE . . . *one of over 300 Pressure-Sensitive Tapes, trademarked* . . .

WORLD'S LARGEST MAKER OF PRESSURE-SENSITIVE TAPES

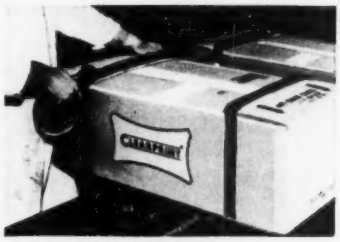
2800 TIMES AROUND THE WORLD...

1957 TWO BILLIONTH ROLL YEAR 1957

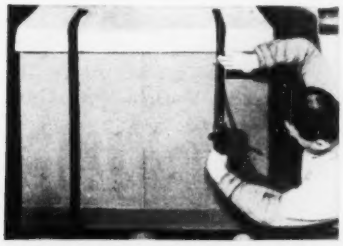
REG. U. S. PAT. OFF.

SCOTCH BRAND

Look what you can do with it!

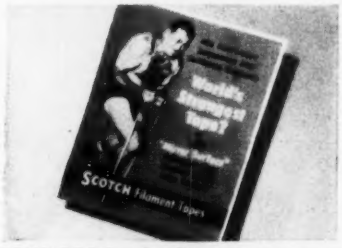


HARD-TO-HANDLE materials, such as paper sheets in bulk, can be easily packaged using "SCOTCH" Brand Filament Tape. Super-strong tape both seals and reinforces covering.



LARGE cartons and expendable pallets are easily closed and reinforced with "SCOTCH" Filament Tape. Tape won't cut workmen's hands; won't harm contents; is easily disposed of.

MAKE your own containers for odd-sized or odd-shaped products with fibreboard padding and "SCOTCH" Filament Tape. "Mirror surface" adhesive sticks at a touch; holds securely.

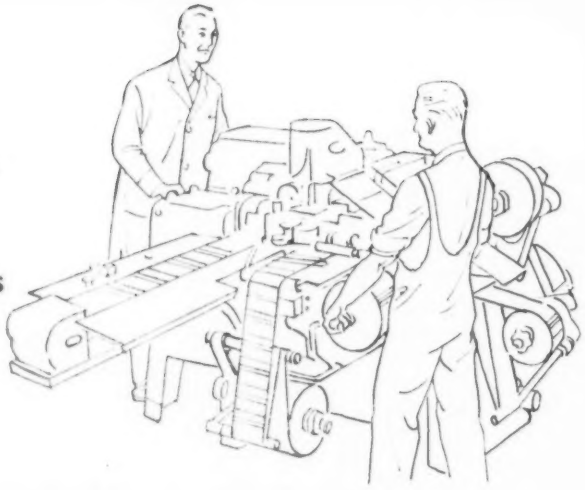


SEND FOR free booklet showing how "SCOTCH" Brand Filament Tape can help solve your heavy-duty packaging and materials-handling problems. Write on your letterhead to 3M Co., St. Paul 6, Minn., Dept. EA-127.

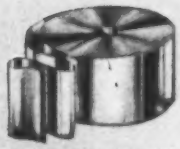
The term "SCOTCH" is a registered trademark of Minnesota Mining and Manufacturing Co., St. Paul 6, Minn. Export Sales Office: 99 Park Avenue, New York 16, N.Y. In Canada: P. O. Box 757, London, Ontario.

PRODUCTS OF 3M RESEARCH

The need to maintain trouble-free operation of high-speed laminating and packaging machines has led to greater demands upon the high qualities of foil.



The excellence of Venesta foil as the modern packaging material is due to...



Venesta foil is second to none in brilliance of finish

Checking at all stages of rolling ensures consistency of gauge.

Venesta foil can form an absolute barrier against bacteria, moisture vapour, odours and gases.

Venesta foil can be laminated to paper or plastic film for specialized end uses.

Direct printing or embossing on Venesta foil eliminates the need for labels.

Throughout manufacture and processing, Venesta foil is checked and rechecked. Because of this constant attention to quality at *all* stages, packers and converters can feel confident that their machinery will run more smoothly, and that lamination will be carried out more satisfactorily.

VENESTA FOIL

Agents for the United States of America & for Canada

PARSONS & WHITTEMORE INCORPORATED

250 Park Avenue, New York, 17, N.Y. phone Yukon 6-6000

For the addresses of our Agents in other countries write to VENESTA LIMITED, Vintry House, Queen Street Place, London E.C.4, England

VENESTA

Background for packaging

Notes, quotes and comments

Nothing wrong with retail sales. As we entered December, the prospect was that for the first time in history retail volume in this country would exceed $200 billion for the year. The indicated total of $200.9 billion would be a gain of 4.9% over the previous highest total of $191.5 billion, recorded in 1956. Merchants across the country, by and large, look for continuing big sales and a record Christmas. "Despite all the talk one hears about our weakening economy," says *Chain Store Age*, "no such pessimism is warranted."

Packaging for the table hasn't gone far enough, says one woman's editor in response to our November article, "The Non-Commercial Look," (p. 111). Why not jars of instant coffee—with a more attractive mold and labels or tags that could easily be removed to produce that non-commercial look on the table? It would, she suggests, result in more coffee being used. There is plenty of room for application of this thinking to many more mealtime products.

Sudden shift in price relationships makes polyethylene the lowest-cost film for simple transparent overwraps. The opportunities and the problems in this are to be highlighted in a series of special articles introduced in this issue. (See "What About Polyethylene?" p. 98). Note that polyethylene resin production is soaring toward the billion-pounds-a-year mark and that one-third of resin already is going into film and sheeting. Consider a single packaging industry: Today about 1½ million pounds of polyethylene film are used for packaging baked goods; in another five years, by 1962, the best estimates are that this figure will reach 18 million pounds.

Department stores express their views about packaging in a report published by NRDGA. Most say they have realized substantial benefits from manufacturer pre-packaging—but they fear the competitive element may get out of hand. They object to (1) odd sizes and shapes of packages and the one-purpose display fixtures such packages demand and (2) the obtrusive promotional material that some resources incorporate in the display fixtures they provide. The suggestion is that packagers should bury the competitive hatchet and get together on standard-size packages and display fixtures.

Two new plastics need to be watched for potential packaging interest. Du Pont is erecting a new plant to produce an acetal resin, which it calls Delrin; it is said to be of interest for aerosol bottles and also as a packaging film because of high fold and tear-strength characteristics. Union Carbide Chemicals has a new water-soluble resin, a high-molecular polymer of ethylene oxide, trademarked Polyox; it produces a tough, flexible film which dissolves in four seconds after submersion in water.

The war is over between specialized package research and package design, says *Frank Gianninoto*. "Any designer who would consider research to be more than a tool of design would be foolish. But on the other hand, any designer who would reject any possible instrument that would insure the marketing success of his package would be equally foolish . . . It is time for designers to stop being fearful that research will hamper creativity and use this contemporary technique to advantage."

Foreign markets offer both an opportunity and a challenge to American packagers with current or potential export sales in mind. Increasingly restrictive import regulations abroad make local manufacturing and packaging operations there more attractive. But there are bottlenecks in personnel, equipment and package supply itself, says *Clifford M. Baker, Jr.*, international purchasing and [*Continued on page 44*]

NEW PRODUCTS
NEW PRODUCTS

...they're putting the future into packages

St. Regis develops new ways to meet industry's packing, shipping and storing problems

A paper box that holds liquids. A "sandwich" of plastic foam and paper that protects frozen foods. Plastic containers that serve individual helpings of ketchup, cream or jelly. These are typical of the variety of ideas pouring out of St. Regis' New Development Program.

Where do the ideas come from?

Often a project starts because our field studies detect a need in the plants of our customers. Or a customer calls us in to help solve a problem. Or a research engineer "dreams up" a way to do a job faster, more simply or better. We put every new development to the basic test: "Will it help provide a better product, better packaging, shipping or storing for American industry?"

Within the past two years literally dozens of new St. Regis products have been welcomed by industry: Big Boy, the bulk container that holds 1,000 pounds; the VredOMatic – the first fully automatic multiwall bag packer; new treatments of glassine and greaseproof papers for packaging; the Slit-case that zips open to unpack in a jiffy. And, in addition, a great many new products from our versatile plastics division.

New ideas, products and methods "come with the package" whenever you call on St. Regis, a company that invests in the future. St. Regis Paper Company, Dept. M-1257, 150 East 42nd Street, New York City.

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production manager of Chesebrough-Pond's foreign plants. He urges packagers to run their international operations with a special headquarters staff in the United States.

Another measure of packaging's enormous postwar growth—not merely in units and dollars, but in *per capita consumption* of packages—is provided by *Al Clunan's* report from the Department of Commerce to the National Flexible Packaging Assn. meeting: In 1941 per capita consumption of packaging *materials only* was $15.02; by 1946 the figure was $32.13, and in 1956 it was $53.80. That's far more than inflation can account for.

Fill control in packaging plants is due for further tightening in view of the improved devices and methods now available. How important is a deviation of 1/10 of 1% in filling weight? One food company found that it amounted to $200,000 a year. A drug company is reported to have found that a tolerance of 1/16 in. in the fill height of one popular item was costing $50,000 a year. Many companies are arriving at shocking discoveries like this because they have failed to take into account that, with increased production speeds in the last few years, losses once considered nominal are multiplying into sizable sums.

Background for packaging

Spectacular growth in half-gallon sizes of paper milk containers is having an effect on competitive situation in this industry. While the theory has been that big urban supermarkets favored the flat-top milk container because it could be stacked, this is not true of the half-gallon size. The leading producer of gable-top containers reports sales of nearly 2 billion of the half-gallon size in 1956 (nearly double the 1954 figure) and claims better than a two-to-one lead in total units over its nearest competitor which produces a flat-top style and does not have a half-gallon size.

[*Continued from page 41*]

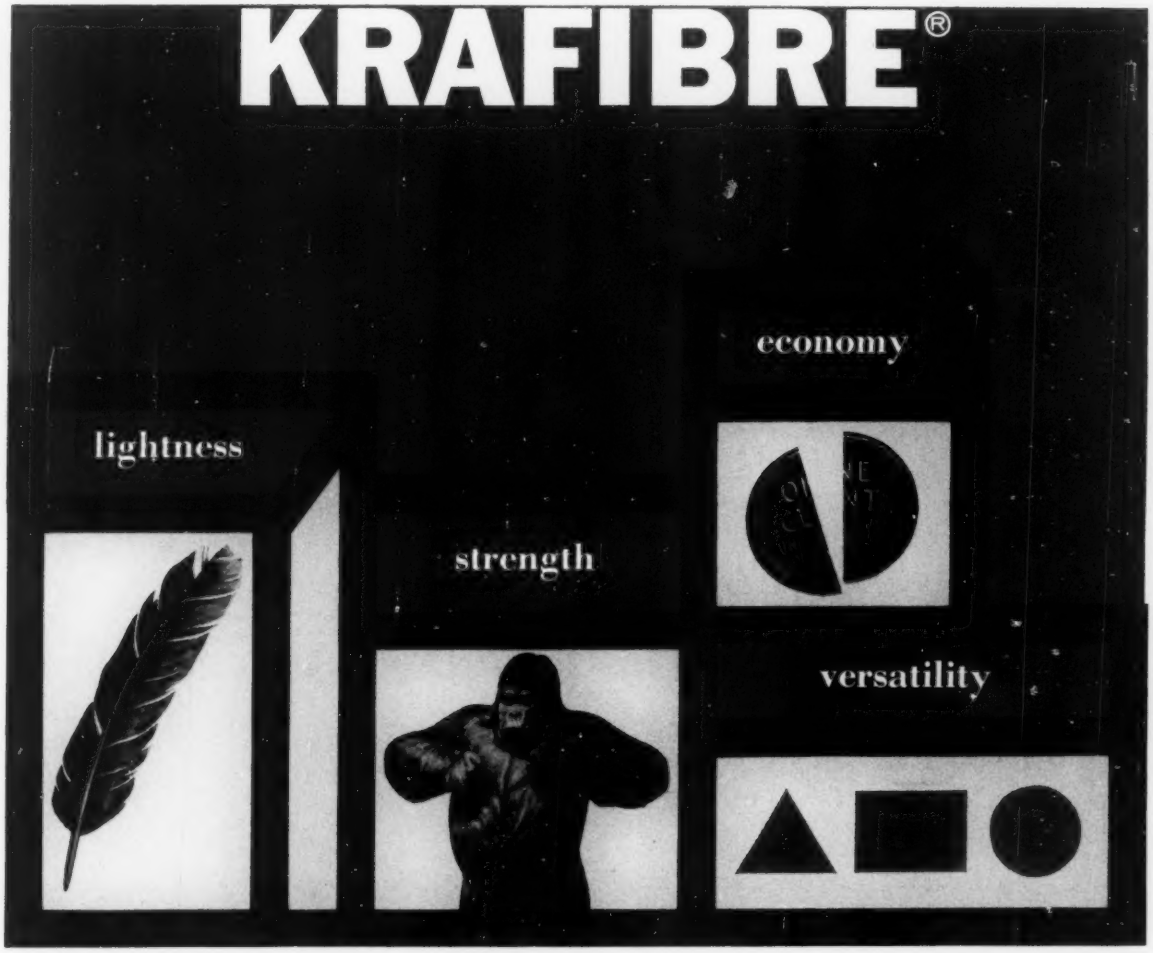
Note the claims for Kaiser's method of deep drawing of aluminum cans. The equipment, now in production in Kaiser's Wanatah, Ind., plant on Kraft Foods and Air Reduction Co. cans, draws seamless can bodies with a depth up to three times the diameter *in a single stroke*. Previously, several draws were required to attain this depth. Walls can be as thin as 0.005 in. and the seamless body, of course, has no question of leakage. An advantage of all-aluminum cans: being a non-sparking metal, it is safe for flammable materials.

Boom in plastics has attracted the attention of the National Assn. of Purchasing Agents. "This phase of the container industry," says the latest *Bulletin*, "is moving up with almost unbelievable speed. New products are coming out each day and competition on established products is very keen. Economies are being effected." *Note:* One of the largest producers of multiwall paper bags has under development multiwall plastic bags, made up of multiple layers of polyethylene film, for the shipment of chemicals, etc.

There's a limit to the reduction of type size on labels, in the eyes of the law. The Government is demanding that ultra-fine print on some drug labels be enlarged, so the consumer can readily read what a drug *won't* do as well as what it will do. This may spur a reverse trend away from the simplified and restrained label design to which many pharmaceutical houses have turned.

Produce packagers shopping the materials market for more efficient, less expensive containers are finding solutions that meet their own production demands and build customer preference. An onion grower in Western New York is substituting corrugated boxes for traditional mesh bags. *Results:* lower cost, reduced warehouse space through taller palletizing, less freezing in cold weather, better retail display, more eye appeal with attractive color printing and increased customer preference.

don't say paperboard ...say KRAFIBRE®



THROUGH 40 years' experience, we have developed a paperboard which we believe is superior to any similar product on the market. We call it Krafibre. KRAFIBRE is strong, lightweight, economical. It is adaptable to any treatment, prints beautifully and keeps its "just-printed" freshness at the point of purchase. WE'D like to send you the new Krafibre sample book so you can see what we mean. It contains Krafibre in natural, white lined and a rainbow of colors — and shows how it takes printing. DROP US A LINE and we'll put your copy in the mail.

40 Years of Progress

COLUMBIA

BOX BOARD MILLS, INC.

CHATHAM, N. Y.

diamond gardner

announcing THE NEW

DIAMOND GARDNER CORPORATION

a merger of THE DIAMOND MATCH COMPANY *and* THE GARDNER BOARD AND CARTON CO.

This merger, completed on October 31, 1957, comes as a natural step in the diversification of both companies, with distinct advantages to each. Long known as a leading manufacturer of matches, Diamond's production, today, includes lumber and lumber products, many woodenware items, and a wide range of molded pulp and paperboard products now accounting for the largest percentage of its operations. The company has an unbroken record of quarterly dividend payments since its organization 76 years ago . . . has forest reserves of over 376,000 acres . . . and reported sales in 1956 of $134 million.

The 57-year-old Gardner Company is a producer of paperboard and cartons for more than 1600 important manufacturers and wholesale and retail merchants. Sales in 1956 were $36 million. For many years much of the paperboard used to make and package Diamond matches has been supplied by Gardner. Both companies depend on the same source of raw material—the forests. The products of both companies, although entirely different, complement each other: Diamond in molded pulp; Gardner in paperboard.

Gardner's research has been responsible for many pioneering developments; Diamond's research has made steady progress toward full commercial utilization of wood fibers. The new corporation's able management, specialized technicians and sales personnel will contribute materially to its growth.

important facts *about the new*
DIAMOND GARDNER CORPORATION

Combined 1956 sales $170 million.

Combined total assets $141 million.

Combined working capital $52 million.

A diversified business—approximately 47% of combined production in molded pulp and paperboard, 23% in retail yards and stores, 17% in matches and woodenware, 13% in lumber production and mill sales.

11,000 employees in 27 manufacturing plants, 10 sawmills, 88 retail stores and lumber yards.

A current $32 million expansion and modernization program.

A dynamic growth potential in diversified forest products.

SOME DIAMOND GARDNER PRODUCTS:

"Foodtainers"®—molded pulp containers for prepackaging meat and produce for America's 27,000 self-service markets.

Custom cartons—multi-colored packages for over 1600 customers in soap, tobacco, food, beverage, pharmaceutical and other industries.

Egg cartons—molded pulp and paperboard retail containers for egg packers, large and small.

Retail folding boxes.

Corrugated shipping containers.

Disposable paper plates, pie plates and cake circles.

Matches—all types of paper and wooden matches.

Lumber—wholesale and retail.

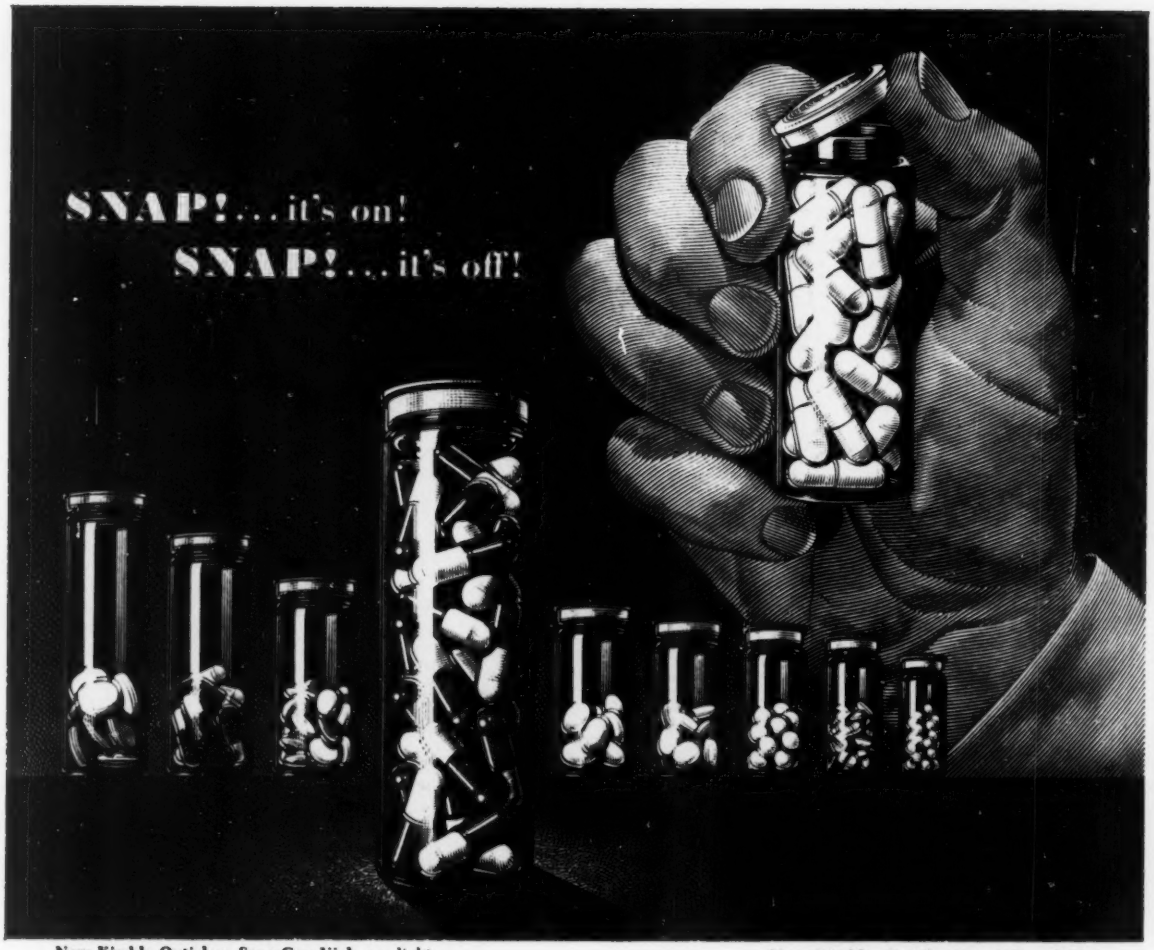
"Neet-Heet"®—self-starting charcoal briquet packages.

Woodenware—toothpicks, clothespins, ice cream confection sticks, etc.

Paperboard—53% of 150,000 tons annual capacity is used for cartons and folding boxes, the remainder sold as paperboard.

Containers for milk and dairy products, produced by an affiliate.

DIAMOND GARDNER CORPORATION • 122 East 42nd Street, New York 17, N. Y.



New Kimble Opticlear Snap-Cap Vials are light and sturdy, offer flawless visibility of your product, permit labeling on outside or inside.

New Kimble Opticlear Snap-Cap Vials are available in a complete range of sizes: 1, 2, 3, 4, 5, 7, 10 and 12 drams.

Now! Showcase *your* dry products for extra profits in

SPARKLING KIMBLE OPTICLEAR SNAP-CAP VIALS

Speeds up packaging! Adds sales appeal! Offers greater convenience to your customers!

Insure the sales success of your dry products: package them for maximum visibility and convenience in Kimble's sparkling Opticlear Snap-Cap Vials.

The new snap-cap, on or off with a flick of the thumb, speeds up packaging. The specially tooled neck and lip assure a snug-fitting cap, minimizing moisture-vapor transmission.

If you have a packaging problem, investigate the outstanding advantages of packaging your dry products in these economical glass containers. Mail the coupon today and we'll send you information, prices and samples of the sizes you use. Kimble Opticlear Snap-Cap Vials are made by the Kimble Glass Company, a subsidiary of Owens-Illinois.

Kimble Glass Company,
P. O. Box MP-12, Toledo 1, Ohio

I would like information and samples of Kimble Opticlear Snap-Cap Vials.

Sizes needed_____

Name_____

Company_____

Address_____

City_____ Zone___ State_____

KIMBLE OPTICLEAR SNAP-CAP VIALS
AN (O-I) PRODUCT

OWENS-ILLINOIS
GENERAL OFFICES · TOLEDO 1, OHIO

Another new development using

B.F.Goodrich Chemical *raw materials*

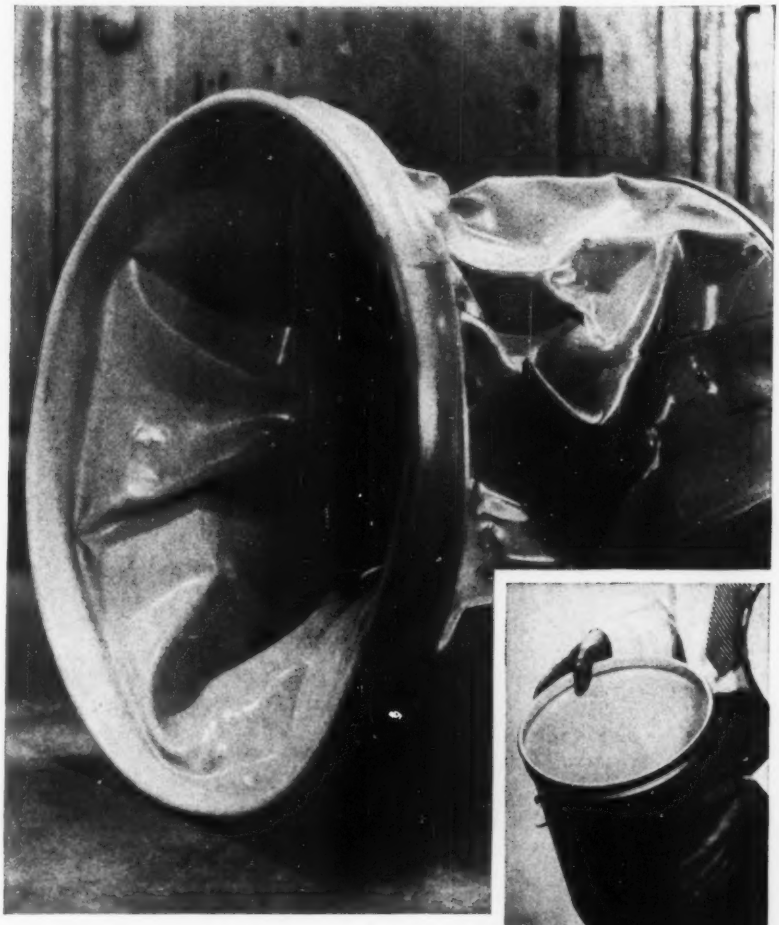
they

KO'd

the drum—

but not

the coating!



Inland Steel Container Company, *Chicago, Ill. offers drums and pails with this lining in a range of sizes from 1 to 65 gallons.*

LOOK CLOSELY at this intentionally mangled steel drum. No cracks, flaking or peeling of the corrosion resistant coating—an organosol based on Geon polyvinyl resin.

Inland Steel Container Company offers this RDL-4 lining on drums and pails for handling highly corrosive liquids, bulk granulars and abrasive solids.

Linings made from Geon are remarkably resistant to abrasion, acids, alkalis and most chemicals. They are long-lasting, have excellent adhesion and high elasticity and are unaffected by temperature extremes or aging.

Geon-lined steel drums and pails have already been proved successful as shipping containers for many materials. Some of these include: corrosive chemicals, aqueous non-solvent solutions, water emulsions, detergents, disinfectants, 50% lactic acid, phosphoric acid, slurries and abrasive materials like titanium sponge and slips for pottery.

You can put versatile Geon resins and compounds to work for you in many ways. For more details, write Dept. FW-6, B.F.Goodrich Chemical Company, 3135 Euclid Avenue, Cleveland 15, Ohio. Cable address: Goodchemco. In Canada: Kitchener, Ontario.

B.F.Goodrich Chemical Company
a division of The B.F.Goodrich Company

B.F.Goodrich **GEON polyvinyl materials • HYCAR American rubber and latex • GOOD-RITE chemicals and plasticizers • HARMON colors**

CONSUMER CONFIDENCE IS EASIER TO CREATE WHEN CARTONS HAVE THE "RIDGELO LOOK"

There's something about a Ridgelo clay-coated carton* that's an implied guarantee of quality in the product it contains. In fact, there are *several* things . . . it looks clean and fresh, it feels good and substantial, it practically *says* "The manufacturer of this product is rightfully proud."

Consumer confidence—particularly in pharmaceutical products—brings consumer acceptance and regular purchases. The visible quality of the package reflects the invisible quality of the contents. *Your* products will undoubtedly sell easier, faster, and enjoy more repeat purchases if cartoned in a beautiful Ridgelo product.

In #90 Ultragloss for example.

Ridgelo CLAY COATED BOXBOARDS
REG. U.S. PAT. OFF.
+ plus A CUSTOM COATING SERVICE FOR PACKAGERS

See for Yourself—Send for Free Samples of this highest gloss coated boxboard.

#90 ULTRAGLOSS (glazed) • **#75 BRUSH FINISH** (silky smooth) • **CUSTOM COATED** (for lacquer or varnish)

STANDARD COATED (fine machine coating) • **METALLIC COATED** (bright, foil-like) • **POLYETHYLENE COATED** (protective barriers)

LOWE PAPER COMPANY • Ridgefield, N. J.

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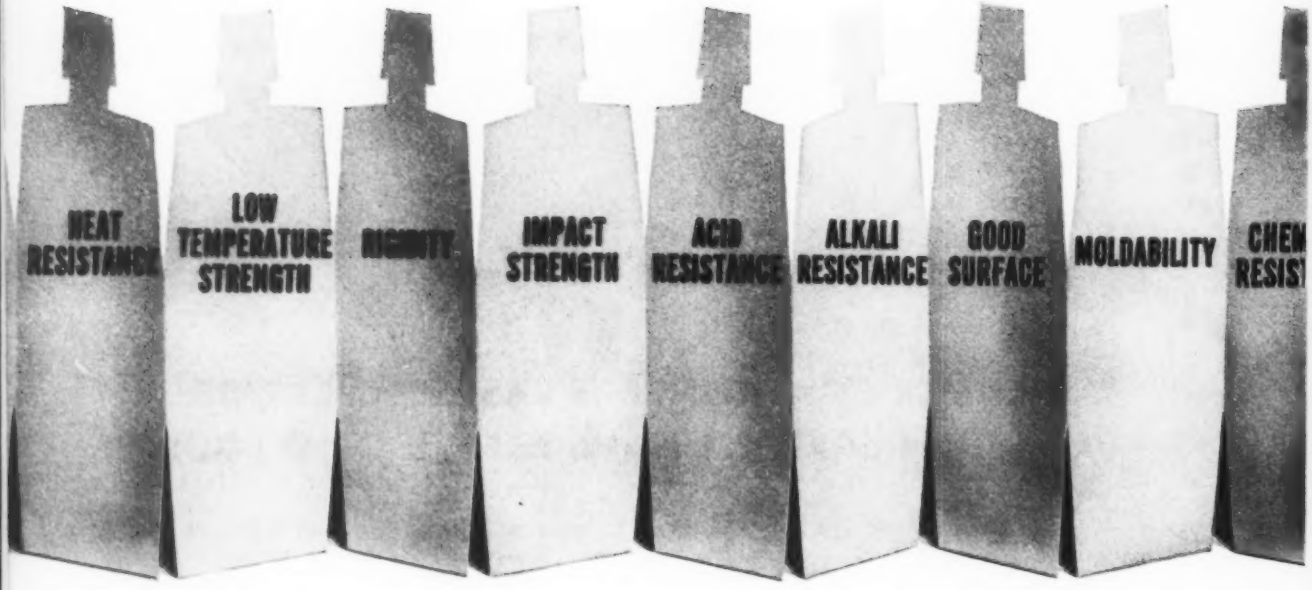
Celanese

OFFERS ALL PACKAGING



The unique properties of Fortiflex-A—particularly its toughness and resistance to chemical attack at elevated temperatures — offer new opportunities in the packaging of food, drugs, cosmetics and chemicals. Applications for Fortiflex-A include: thin wall bottles and vessels . . . light weight, disposable containers vacuum formed from sheet stock . . . sterilizable films and coatings.

Injection Molded Bottles and Containers

Fortiflex-A molds easily in existing polyethylene molds. However, its great rigidity and toughness make possible impressive economies in wall thickness when molds are specially built. Savings in material weight over conventional polyethylene average as high as 40%. The exceptional thermal resistance of Fortiflex-A permits the packaging of hot liquids and semi-solids at temperatures up to 225° F., as well as surgical equipment that requires post-packing sterilization. Its chemical and permeation resistance recommend it as a replacement for expensive materials in the packaging of highly corrosive chemicals.

Blown Bottles and Containers

Lightness with strength and rigidity are obtainable in blow moldings of Fortiflex-A. This molding technique offers valuable economies in material weight, a faster rate of production and real savings in shipping costs of packaged merchandise. When protection against light is required, dense pigment can be incorporated so as to give complete opacity. Blow molded bottles of Fortiflex-A can be produced at only ⅛ the weight of glass and ¼ the weight of metal.

Supported and Unsupported Films

As a potential material for supported and unsupported films, the packaging advantages of Celanese Fortiflex-A open up a new range of opportunities in food, medical and industrial packaging. Films of Celanese Fortiflex-A will make possible sterilization after packaging. They exhibit great toughness and durability, virtually zero vapor transmission, and good transparency. The characteristic rigidity of Celanese Fortiflex-A will produce a film easily handled on standard automatic packaging machinery.

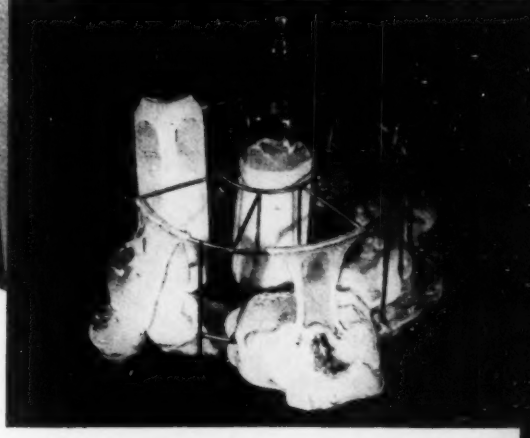
FORTIFLEX-A

A POLYOLEFIN PLASTIC

THESE ADVANTAGES

2 REASONS WHY FORTIFLEX-A BELONGS IN YOUR PACKAGING PROGRAM

STRENGTH AND RIGIDITY IN THIN WALLS! Camera time-exposure dramatizes toughness and rigidity of Fortiflex-A. Liquid filled, blown bottle is dropped from approximately shoulder height onto hard surface. Close-up, taken after test, shows bottle to be undamaged.



HEAT RESISTANCE! Laboratory test displays the superior heat resistance of Celanese Fortiflex-A. Bottles molded of Celanese Fortiflex-A, glass and ordinary polyethylene were sterilized for 15 minutes at 15psi, 250°F. Only the glass bottle and Fortiflex-A bottle withstood the sterilization temperature. The ordinary polyethylene bottles were reduced to an amorphous state.

Vacuum Forming

Extruded sheeting of Celanese Fortiflex-A exhibits excellent vacuum forming characteristics. Deep drawing qualities and minimum post-mold shrinkage give advantages in this application. The great toughness and durability of extruded sheeting of Celanese Fortiflex-A are factors that will contribute to more efficient, more economical packaging. Extruded sheeting of Celanese Fortiflex-A is now available from suppliers. The Celanese Sales Development Department will be glad to supply names and addresses.

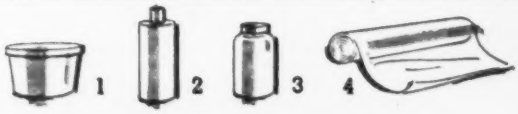
For complete information about Celanese Fortiflex-A—production-run quantities, test quantities, prices—write Sales Development Department, Celanese Corporation of America, Plastics Division, Dept. 108-L, 290 Ferry Street, Newark 5, N. J.

Celanese® Fortiflex®

Celanese PLASTICS and RESINS

Celanese Corporation of America, Plastics Division, Newark 5, N. J.

Canadian Affiliate: Canadian Chemical Co., Limited, Montreal, Toronto, Vancouver
Export Sales: Amcel Co., Inc., and Pan Amcel Co., Inc., 180 Madison Avenue, N. Y. 16, N. Y.



Sales Development Department, Celanese Corporation of America, Dept. 108-L, Plastics Division, 290 Ferry Street, Newark 5, N. J.

☐ I am interested in more information about Fortiflex-A for possible application as_____(enter number).

☐ Have a representative call on me.

Name_____

Title_____

Company_____

Address_____

City_____ State_____

For new ways to control your costs . . .

take a *Plant-Wide Look* at Weighing!

What's the status of weighing in *your* plant? It's important to know because weighing is a vital element in the overall cost control system. Weight records directly affect costs, quality, inventory control and customer billing. Weighing errors—or inadequate weight data—set the stage for losses in output, profits and customer good-will.

This calls for integration of weighing in a plant-wide weighing system . . . the right scales in the right places . . . to supply basic records on materials received, processed, shipped or transferred.

To learn the job your scales are now doing, we invite you to send for the new Toledo Weight Fact Kit. It will help you determine how well your scales measure up as a weighing system—help you detect weighing inefficiencies that drain profits.

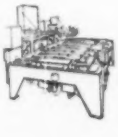
REQUEST YOUR WEIGHT FACT KIT NOW. No obligation. Address Toledo Scale Company, 1410 Telegraph Road, Toledo 13, Ohio.

TOLEDO® HEADQUARTERS FOR WEIGHING SYSTEMS

CUSTOM PRODUCTS FOR INDUSTRY

REMOTE DIGITAL WEIGHTS. Toledos automatically transmit weights to electric office machines located anywhere.

ELECTRONIC SCALES give electronic wings to weights; head may be located anywhere.



TESTING Toledos today test a wide range of parts; this device for leaf springs.

AUTOMATIC BATCHING SYSTEMS interlock batteries of scales.

Add a touch of rich distinction with

BBD MET-L-TONE FLEXOGRAPHIC INKS

For use on

CELLOPHANE*

POLYETHYLENE

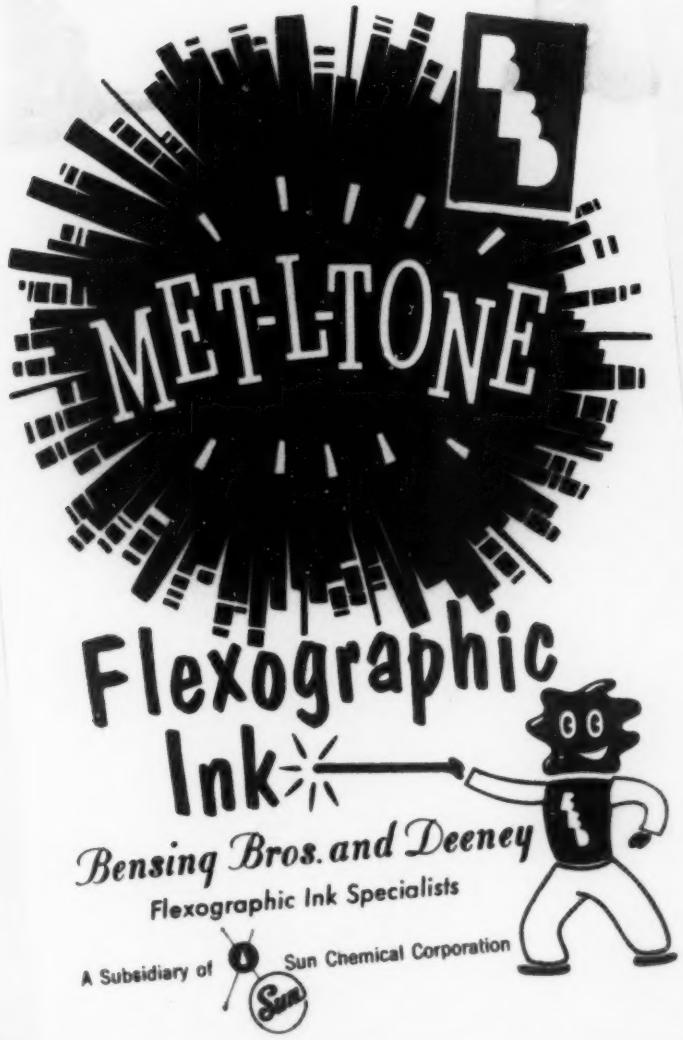
GLASSINE

PAPER

BOXBOARD

* *all types except Saran-coated*

A complete range of beautiful metallic colors and shades



Now you can add **extra sparkle and smartness** to almost any package by using BBD "MET-L-TONE" flexographic inks. Designed for reverse printing on practically all popular flexible packaging materials, "MET-L-TONE" inks are as easy to print as any other fine BBD alcohol-type ink. And they offer all the same advantages too – extra *strong adhesion* at high and low temperatures ... *non-blocking* at temperatures to 130° F. ... outstanding printability. They lay smoothly, print sharply and – when used on paper and board – may be waxed without fear of bleeding. Detailed information on "MET-L-TONE" inks, together with sample prints, may be obtained from your nearest BBD office ... or by writing to *Bensing Bros. & Deeney, 3301 Hunting Park Ave., Philadelphia 29, Pa.*

Manufacturing plants in
PHILADELPHIA • CHICAGO
CAMBRIDGE, MASS. • MONROE, LA.
SAN LEANDRO, CAL.

•

A subsidiary of
Sun Chemical Corporation
Sales offices in all principal cities

•

Export:
Overseas Division,
Sun Chemical Corporation
L. I. C., N. Y.

Ask about BBD's new "GOLD-TONE" Flexographic Inks too

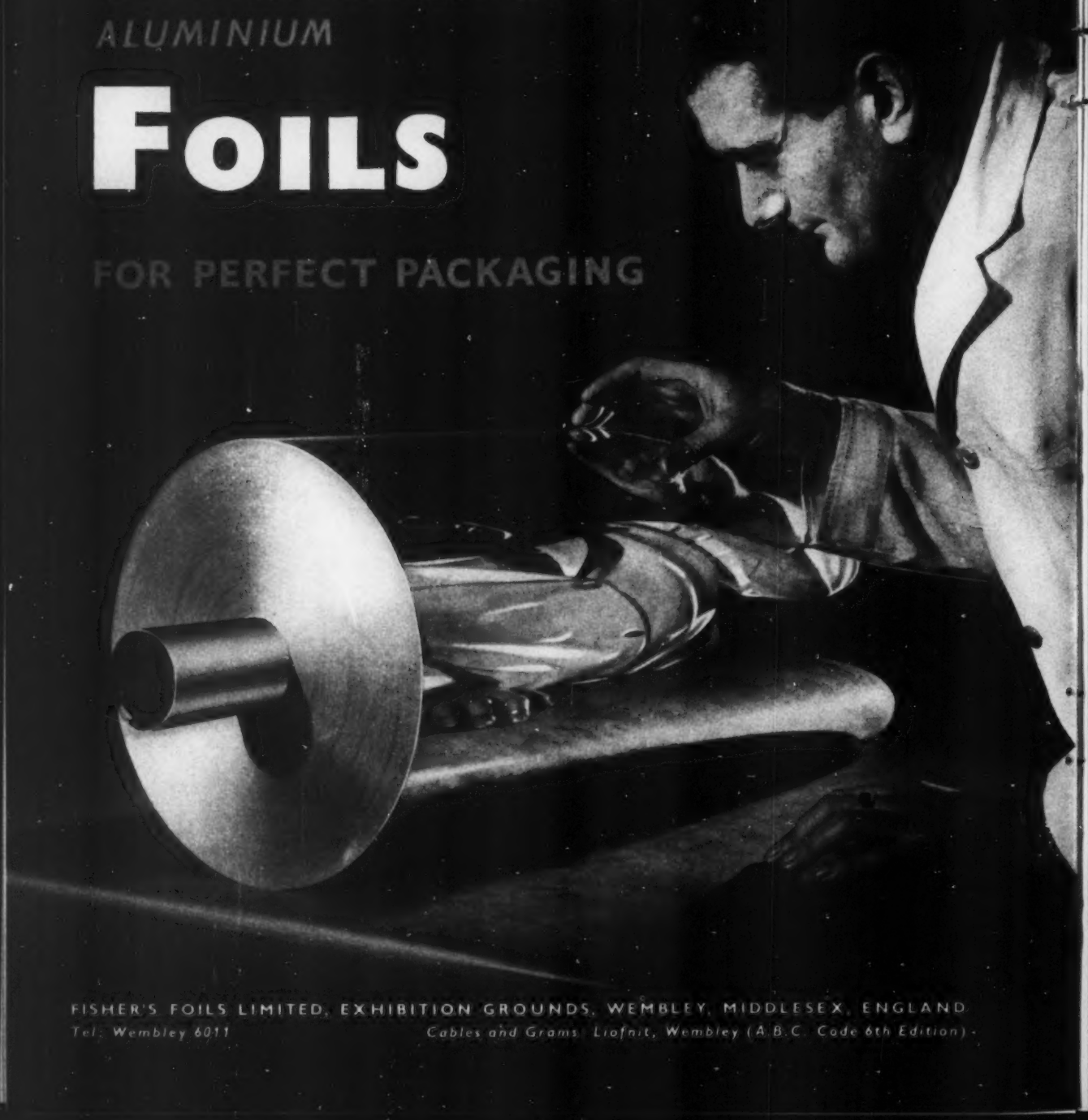
CUSTOM MADE

FISHER'S

ALUMINIUM

FOILS

FOR PERFECT PACKAGING



FISHER'S FOILS LIMITED, EXHIBITION GROUNDS, WEMBLEY, MIDDLESEX, ENGLAND

Tel: Wembley 6011 *Cables and Grams: Liofnit, Wembley (A.B.C. Code 6th Edition)*

glass containers move more chemical specialties

Use **Anchorglass**® *containers sealed with* Anchor® *caps*

. . . because they are more convenient

CONSUMERS prefer and buy more chemical specialties in glass packages because they are easy, quick and safe to open and easy to use. They reseal easily and protect unused contents which are always visible. They won't rust or corrode. Volatile contents cannot evaporate and dry products are shielded from moisture absorption. The purity, potency and other qualities which characterize your chemical specialties are thus fully protected. Pack and move more of your chemical specialties in glass . . . in Anchorglass and seal them with dependable Anchor metal or molded closures.

ANCHOR HOCKING
GLASS CORPORATION
Lancaster, Ohio

SURE-WAY®
PACKAGE CASER*

handles them all!

CUTS CARTONING COSTS

The "Sure-Way" is the most versatile and economical automatic package caser on the market today. In some installations it has realized savings of up to 70 and 80% in man-hours alone!

MANY IMPORTANT ADVANTAGES: Even with its high capacity (up to 500 packages per minute depending on package size, type of loading case and casing pattern employed) the "Sure-Way" is near-human in gentleness to packages, over-wraps and labels.

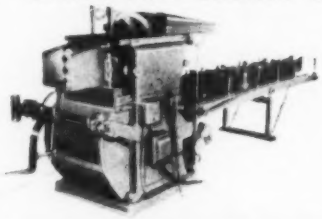
It's compact, too—space requirements are cut as much as 80%. Other features include:

Complete safety through automatic controls • Broad flexibility of loading patterns • Handles variety of case and package sizes Loads top, end or side opening cases • Low power requirements Moderate capital investment • Extremely low maintenance costs

Typical products handled include cereals, detergents, bar soap, sugar, cake mixes, oleomargarine, cigar boxes, frozen foods, feed and seed, and pharmaceuticals.

*Exclusive Distributors: Food Machinery and Chemical Corporation

OTHER FMC CASING EQUIPMENT



NON-SHOCK CASER FOR CANS

Compact and flexible, FMC Can Casers are ruggedly built for long life, handle specific can sizes and certain combinations from 202x308 packed 6x8, to 603x700 packed 2x3. Handles cans in upright position. No damaging impact to cans, labels or product. Can to can contact is limited to beads. Speeds up to 1200 cases per hour, limited only by the speed of the operator.

fmc

FOOD MACHINERY AND CHEMICAL CORPORATION

Canning Machinery Division

General Sales Offices:
WESTERN: SAN JOSE, CALIF. • EASTERN: HOOPESTON, ILL.

MYLAR* A TOUGH FILM for tough packaging jobs

New pouch with MYLAR® offers better protection... greater eye appeal to luncheon meats

Du Pont "Mylar"* polyester film is an essential component in the new vacuum pouches** for luncheon meats being adopted by many leading meat packers like John Morrell & Company. Material using "Mylar" is being selected because tests prove it to be the best film for keeping the rich, appetizing color in luncheon meats. And, because "Mylar" is the strongest of all films, "leakers"—pouches which lose vacuum—are virtually eliminated. These factors mean extra sales and extra production economies for the meat industry.

Meat joins a growing list of major industries that are taking advantage of the remarkable properties of "Mylar". Only "Mylar" offers you all these packaging benefits:

- **Complete transparency**
- **High tensile and impact strength—strongest of all plastic films**
- **Long life . . . won't crack, become brittle . . . no plasticizer to dry out**
- **Inert to moisture, unaffected by oils and grease**
- **Stability . . . "Mylar" retains its dimensions under extremes . . . from -80° to 300° F.**

"MYLAR" can help you solve a tough packaging problem. For more information see your Du Pont representative. Or mail the coupon. E. I. du Pont de Nemours & Co. (Inc.), Film Dept., Wilmington 98, Delaware.

DU PONT
REG. U.S. PAT. OFF.

Better Things for Better Living . . . through Chemistry

*"**MYLAR**" is Du Pont's registered trademark for its brand of polyester film.*

***Du Pont manufactures only "Mylar" polyester film. Converted film and pouches are made by a number of firms. Names upon request.*

DU PONT MYLAR® POLYESTER FILM

E. I. du Pont de Nemours & Co., (Inc.), Film Dept., Room MP-12, Nemours Bldg., Wilmington 98, Delaware.

☐ Send me information on vacuum pouches made with "Mylar".

☐ Send me the names of Authorized Converters manufacturing pouches made with "Mylar".

Name_____

Firm_____

Address_____

City_____ State_____

Leading brands of household goods are protected by Mead container board

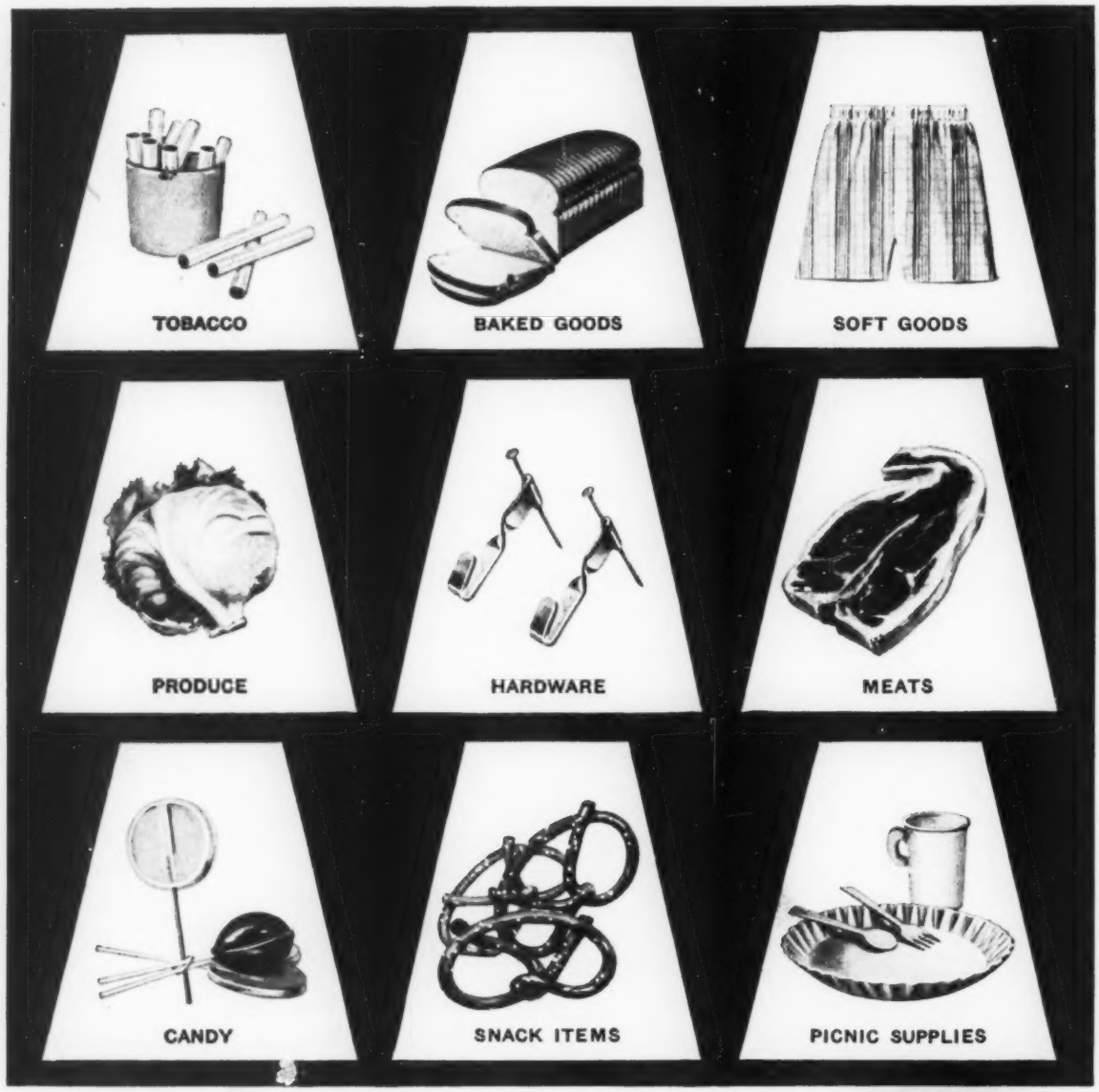
From the seven large paperboard mills of The Mead Corporation flow thousands of tons of top-quality container board each year. Converted into strong shipping containers, Mead board protects a good share of America's household goods from point of production to ultimate destination.

Continuous product research has underlined the top quality of Mead virgin kraft liners and semi-chem corrugating medium. For example, Mead was the leader in developing the now famous and widely-used semi-chemical pulping process of short, strong hardwood fibres for corrugating medium. The use of these hardwood fibres upgraded the strength of shipping containers and gave added protection to such valuable household items as sofas, chairs and mattresses.

THE MEAD CORPORATION Sales Offices: Mead Board Sales, Inc.
Cincinnati • Chicago • Detroit • Boston • Newark, N. J. • Lynchburg, Va.

MEAD
container board

Can you spot a product **NOT** *sold in* **AVISCO** *cellophane?*



Pick a packaged item—any item. Whether it's pins or pies, shirts or spark plugs, candy or candles, AVISCO cellophane protects and sells them all.

Cellophane's versatility is boundless. When a package must be grease-proof . . . or water-resistant . . . air-tight . . . moisture-proof . . . beautifully printed, there's an AVISCO cellophane to fill the bill. Moreover, with heat-sealing cellophane, high-speed packaging machines can wrap and seal thousands of packages an hour.

NO OTHER TRANSPARENT MATERIAL PERFORMS SO PERFECTLY ON HIGH-SPEED PACKAGING MACHINERY.

It's difficult to find any kind of packaged product that can't be wrapped better, and sold faster, in AVISCO cellophane.

In fact, *all* the products shown above are sold in AVISCO cellophane.

AVISCO CELLOPHANE

AMERICAN VISCOSE CORPORATION • FILM DIVISION • 1617 PENNSYLVANIA BOULEVARD • PHILADELPHIA 3, PA.

STRIKING CAN DESIGN AND LITHOGRAPHY GIVE PRODUCTS INSTANT BRAND IDENTIFICATION . . .

Aren't these cans familiar? They are to most people for two good reasons. One, they hold well-known brands. Two, they're packaged for instant recognition in Continental specialty cans. Each can has been made a national landmark by Continental craftsmen. That's because these specialists have an expert way with design and lithography. The colors and patterns they produce are *outstanding.*

Why not put these Continental services to work for you? You're sure to get a can that's just the right size, shape and design to make *your* product a permanent landmark in today's homes.

Continuous message... Continuous design

Readily identified in the store, whichever face it shows. Readily identified as a Continental specialty can because of its dramatic lithography. We've a palette-full of colors for your choice.

QUALITY Continental SERVICE

CONTINENTAL CAN COMPANY

Eastern Division: 100 E. 42nd St., New York 17
Central Division: 135 So. La Salle St., Chicago 3
Pacific Division: Russ Building, San Francisco 4

the Lowest Price in Carton-Closing History!

the Really Modern Way to Close Cartons
... with Staples ... from the Outside, After They're Filled!

International HAND BOXER

Everything you want in up-to-date carton closing: *SPEED!* Hundreds of cartons per hour—filled, neatly stapled from the outside and ready for delivery ... *STRENGTH!* Can't "pop" open, discourages pilferage, meets Rule 41 requirements ... *ECONOMY!* You won't waste material, or carton set-up space, or time waiting for glue to dry ... *FLEXIBILITY!* It's portable. Carry it to the carton. Ideal as standby or overload equipment right in the production area.

The INTERNATIONAL Hand Boxer is the *only Staple Carton Closing Machine* on the market with built-in penetration control and clinch control—and designed for convenient one-hand control—*FOR LESS THAN* $50.00! See your International Man soon for a revealing demonstration.

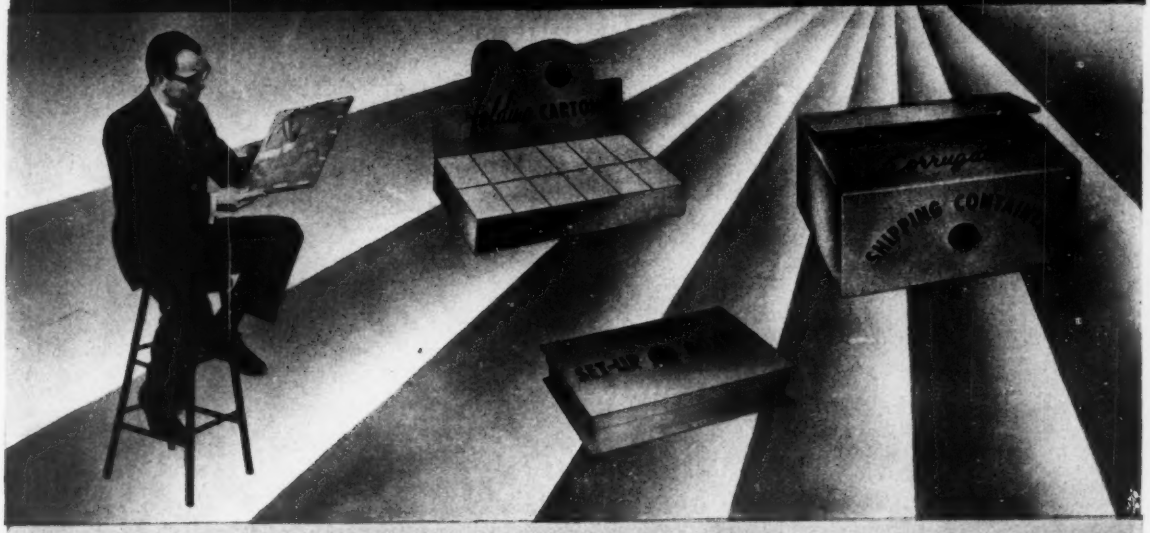
International Staplers

INTERNATIONAL STAPLE & MACHINE COMPANY

Originators of Carton Closing Staplers

800 E. HERRIN STREET • HERRIN, ILLINOIS

MORE PROFIT
CENTRAL FIBRE



See CENTRAL FIBRE *for Packaging Showmanship*

Packaging showmanship attracts attention to packages and helps sell products—often at no additional packaging cost.

Let Central Fibre show you how the magic of showmanship can be added to your product

As a consolidation of some of the oldest paperboard mills and box plants in America, Central Fibre represents a considerable wealth of skill and know-how. Central Fibre's unusual growth in recent years reflects its great vitality.

Central Fibre can convert this know-how and vitality into better showmanship for your package and greater sales and more profits for you.

CENTRAL FIBRE SERVES AMERICA FROM 21 CONVENIENT CITIES

PAPERBOARDS AND SPECIALTIES
CORRUGATED SHIPPING CONTAINERS
FOLDING CARTONS AND SET-UP BOXES
EGG PACKING MATERIALS
POULTRY HOUSE SUPPLIES
MAPES MOLDED PULP PRODUCTS

Central Fibre

More Than 80 Years of Continuous Service and Progress

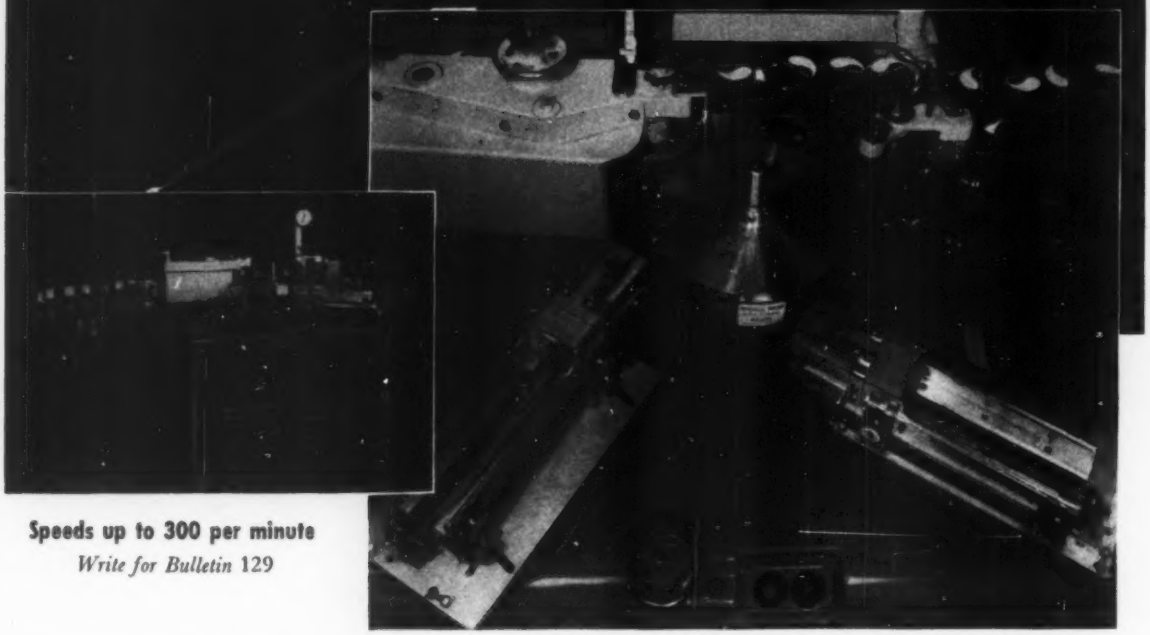
CENTRAL FIBRE PRODUCTS COMPANY

General Office Quincy, Illinois

Lightning Labelers

DESIGNED FOR TOP SPEED APPLICATION

on round containers



Speeds up to 300 per minute
Write for Bulletin 129

Operating on an all mechanical, constant motion principle, these machines speed the labeling operation through their simplification of design and their own uniquely direct method of application.

A helical intake feeds and spaces the containers which travel straight through on a platform chain conveyor.

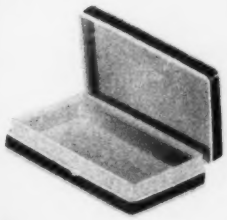
From a vertical gluing roll a uniform film of adhesive is transferred to segments of a glue cylinder. These glue faced segments then "pick off" labels from the reciprocating magazines. The glued labels are directly transferred to the containers by means of a rotating transfer cylinder. The containers then roll between pressure belts and a stationary pad which properly "wipes" down each label.

Straight through without stop or pause — that's the answer to the Lightning Labeler's (1 and 2) smooth, uninterrupted delivery of containers with accurately registered, smoothly adhered labels. If your container is round, the Lightning's a machine you should look at, by all means!

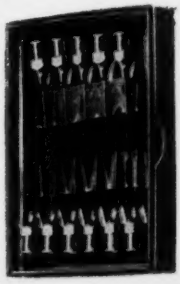
PNEUMATIC SCALE CORP., LTD., 82 Newport Avenue, Quincy 71, Massachusetts. *Also: New York; Chicago; Dallas; San Francisco; Los Angeles; Seattle; Leeds, England. Canadian Division: Delamere & Williams Company, Ltd., Toronto.*

PNEUMATIC ***Packaging and Bottling Equipment***

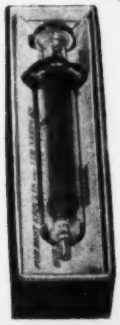
ROWELL BOXES



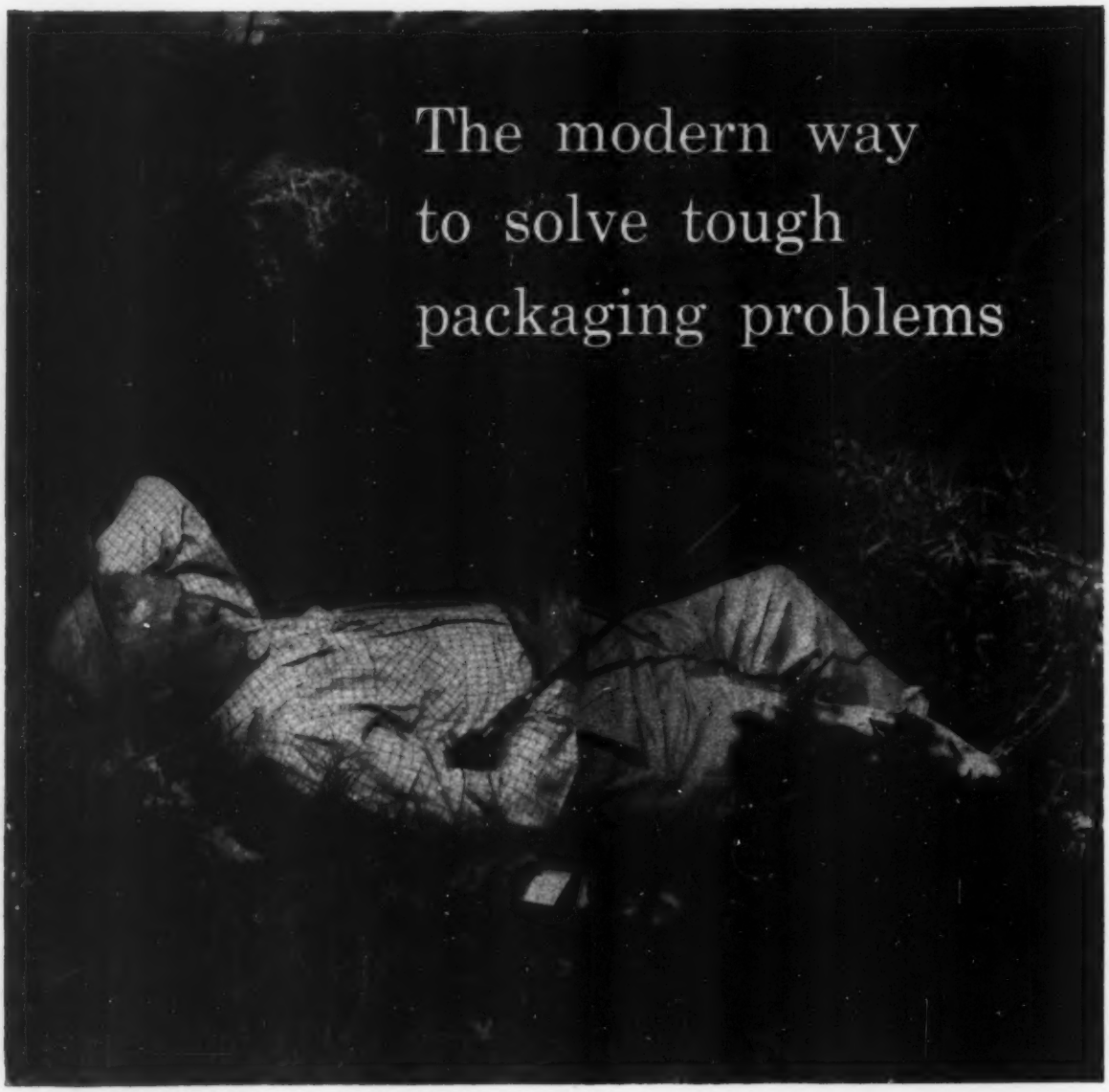
High in quality...
production
to meet your need



Set-up boxes in a wide range,
made for Cosmetic & Drug Trade
throughout the United States.
Inquiries also invited from
box users in other lines



E. N. Rowell Co.
INC.
[illegible] NEW YORK



This man has a tough packaging problem.

Is he worried? No. Hiking his blood pressure? No. Driving his associates nuts? Not a bit.

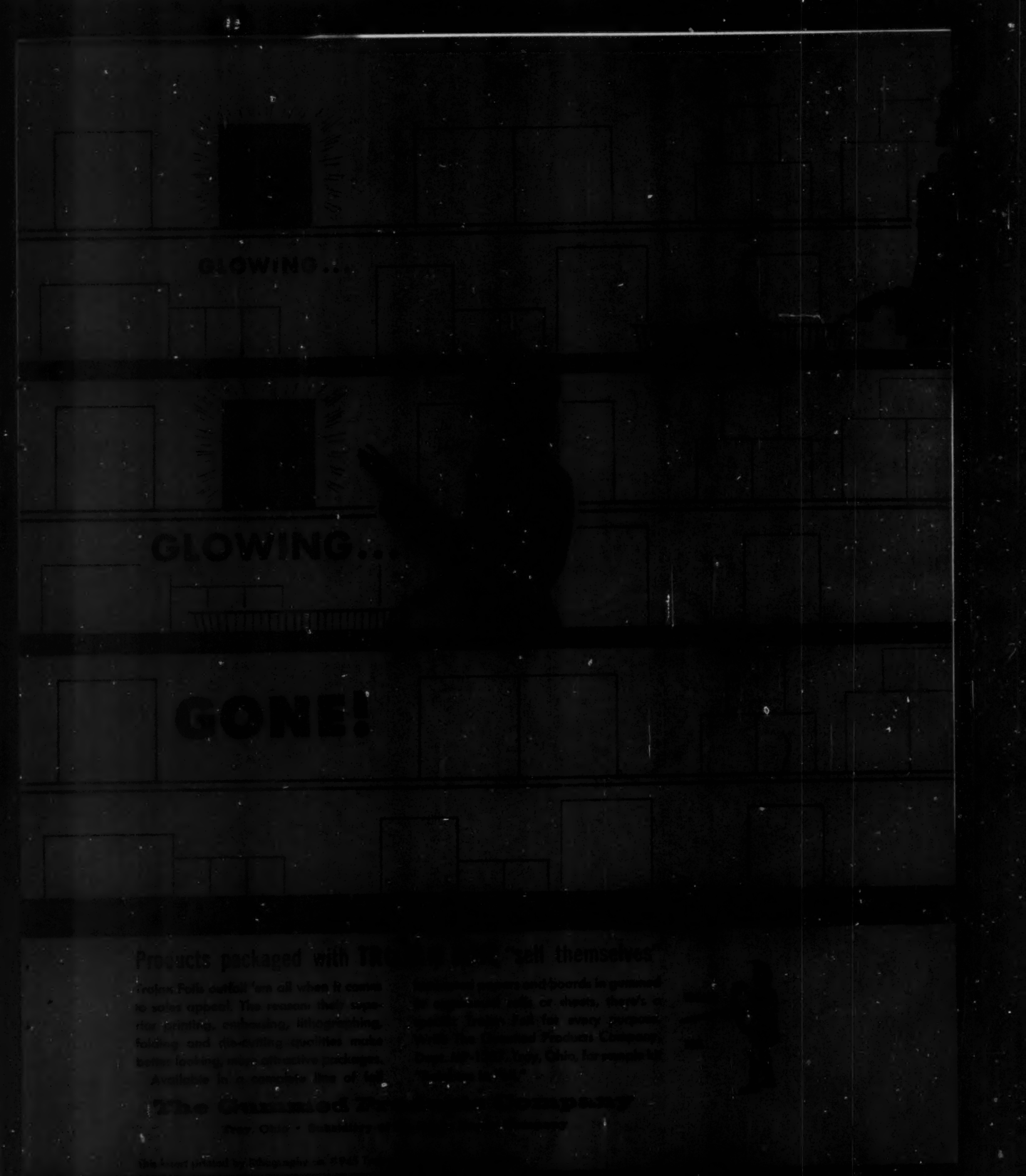
Is he solving his problem? YES. He's doing it the modern way . . . he's given it to Bemis Packaging Engineers.

Bemis can contribute experience, facilities and know-how to an amazing range of packaging problems. Does your product need special protection . . . or sales "oomph" . . . or a more economical package? Is your product of unusual shape or size, and thus difficult to package? Do you need economical, efficient package filling-and-closing machinery?

What *is* your problem? Our engineers can probably work out the *right* answer for you. Write us.

General Offices—408 Pine Street, Box 49, St. Louis 2, Mo.—Sales Offices in Principal Cities

Bemis


GLOWING...
GLOWING...
GONE!

Fresh approach to packaging

This housewife is wrapping meat for her freezer with paper that's been coated with Tenite Polyethylene plastic.

The polyethylene coating makes this an ideal "freezer wrap." It's a tough wrap that doesn't crack even when sharply creased or folded. Low temperatures that would embrittle paper alone, have no effect on the polyethylene coating, for this plastic retains its flexibility many degrees below zero. Sharp bones that would readily puncture paper, find it a much tougher job to pierce paper reinforced with a coating of polyethylene. And being resistant to the transmission of water vapor, the plastic coating prevents loss or gain of moisture, protecting the quality of the contents. Finally, the polyethylene coating means a wrapping paper that can be heat-sealed for quick and easy closing.

Tenite Polyethylene lends its versatile properties to a wide variety of packaging applications. It can be extrusion coated on paper, boxboard, film and foil. It can be extruded into tough clear or colored film. It can be blown to form unbreakable squeeze bottles or injection molded into containers of all shapes and sizes.

For more information on the packaging usefulness of Tenite Polyethylene, write EASTMAN CHEMICAL PRODUCTS, INC., subsidiary of Eastman Kodak Company, KINGSPORT, TENNESSEE.

TENITE
POLYETHYLENE
an Eastman plastic

1932—EASTMAN'S 25TH YEAR IN PLASTICS—1957

"White Bear" freezer paper, coated with Tenite Polyethylene, is a product of Ludlow Papers Inc., Homer, Louisiana.

From pine... to pulp...
to paper... to people...
through KVP

"Protecting America's food is our business. We comb 3,400,000 acres of woods to find suitable trees to make into protective papers. Some call us 'Tree Farmers'—we grow more trees than we use. So there will always be KVP paper for the future."

How KVP Papers protect and sell food products extra well...without extra cost

When you are the world's largest maker of food protection papers, as we at KVP are, you are bound to be able to do the job better.

The food processor or manufacturer who counts on KVP for food protection papers gets paper of extra-high quality, and packaging with extra "sell."

We can tell you this with assurance because we make the paper ourselves from selected trees we grow ourselves. And KVP packaging experts put maximum eye appeal into selling designs, which are faithfully reproduced by superb printing—because KVP modern letterpress and gravure presses are manned by artist-craftsmen who know how to make the most of color! The end result is superior and economical packaging.

You get another advantage after we deliver your job—KVP packaging engineers are expert at helping you get maximum production on your wrapping machines with KVP papers. Is it any wonder that so many of the nation's top food brand names are protected and "sold" by KVP papers? We invite you to write us immediately for samples and information about KVP food protection papers.

THE KVP COMPANY KVP KALAMAZOO, MICHIGAN

MERCURY MACHINES — PACE SETTERS FOR THE FOLDING CARTON INDUSTRY

SINCE 1933

A Symbol of fine
CRAFTSMANSHIP

Simplified Rotogravure Printing and Cutting

. . . with the NEW J-2 ROTOGRAVURE FOLDING CARTON MACHINE

Designed and manufactured for folding boxmakers structurally, operationally and economically

PROVEN SUPERIOR FEATURES:

Printing press completely isolated from adverse effects of stock roll, cutter-creaser or rewinder action.

Walk-in accessibility — no web between operator and printing cylinder — provides for ease of operational and quality control.

Scientifically engineered reverse doctoring of printing cylinders — not one streak in three weeks of operation.

Constant web tension at any desired level into first color and out of last color.

Simplicity of printing cylinder, impression cylinder and doctor blade mounting permits job changes in approximately 15 minutes per color.

Compensator register control, together with integral assembly of printing cylinder, cylinder drive and selector switch, assures superior register between colors.

Fluid power drive results in lower installation cost, lower waste due to starts and stops, less floor space and simplified maintenance.

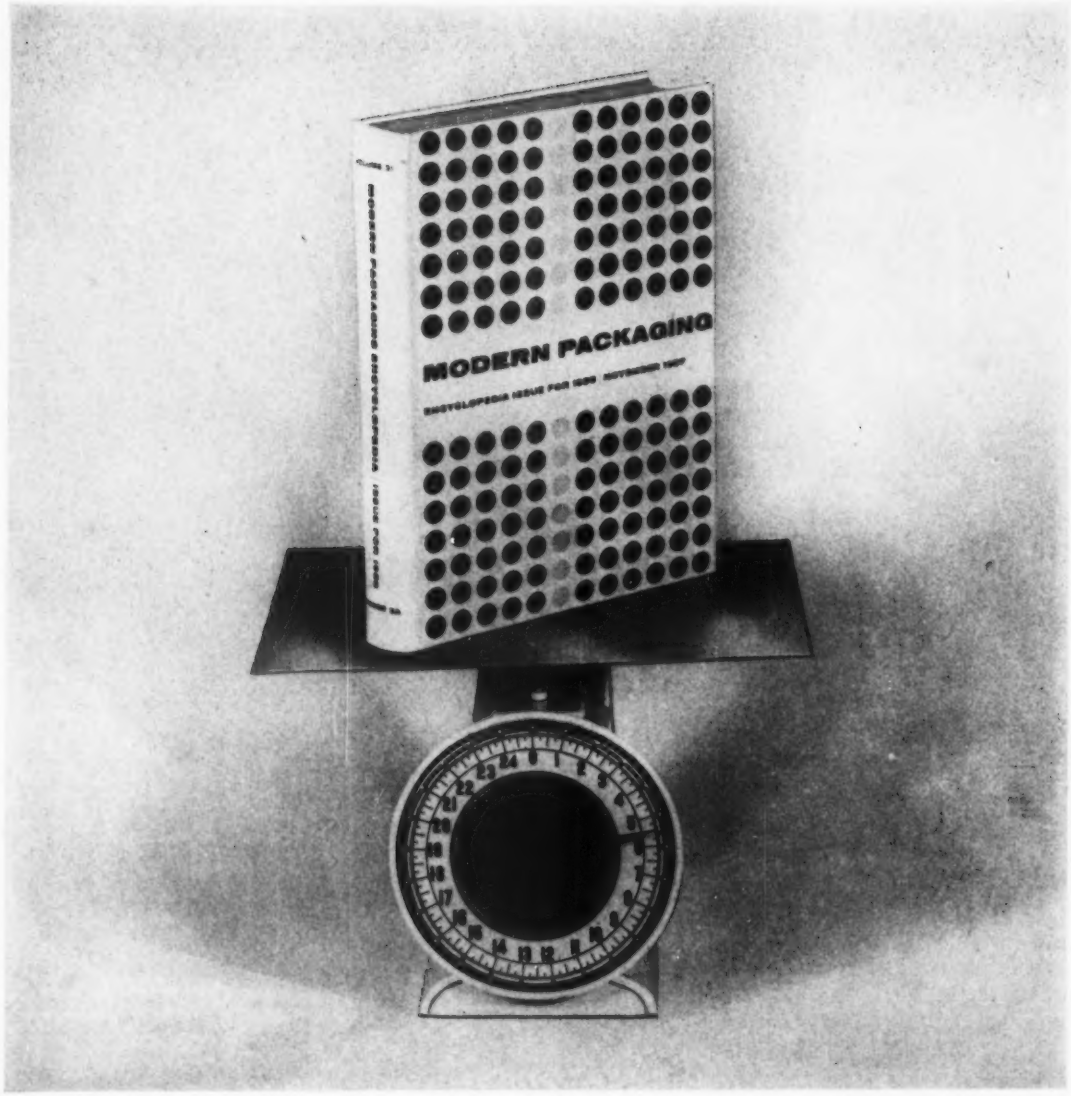
Phone, write or wire MERCURY now for full information.

Available with either right or left hand web flow, in 28, 36 or 44 inch web width.

Profit Producing Machinery for Paper Converters

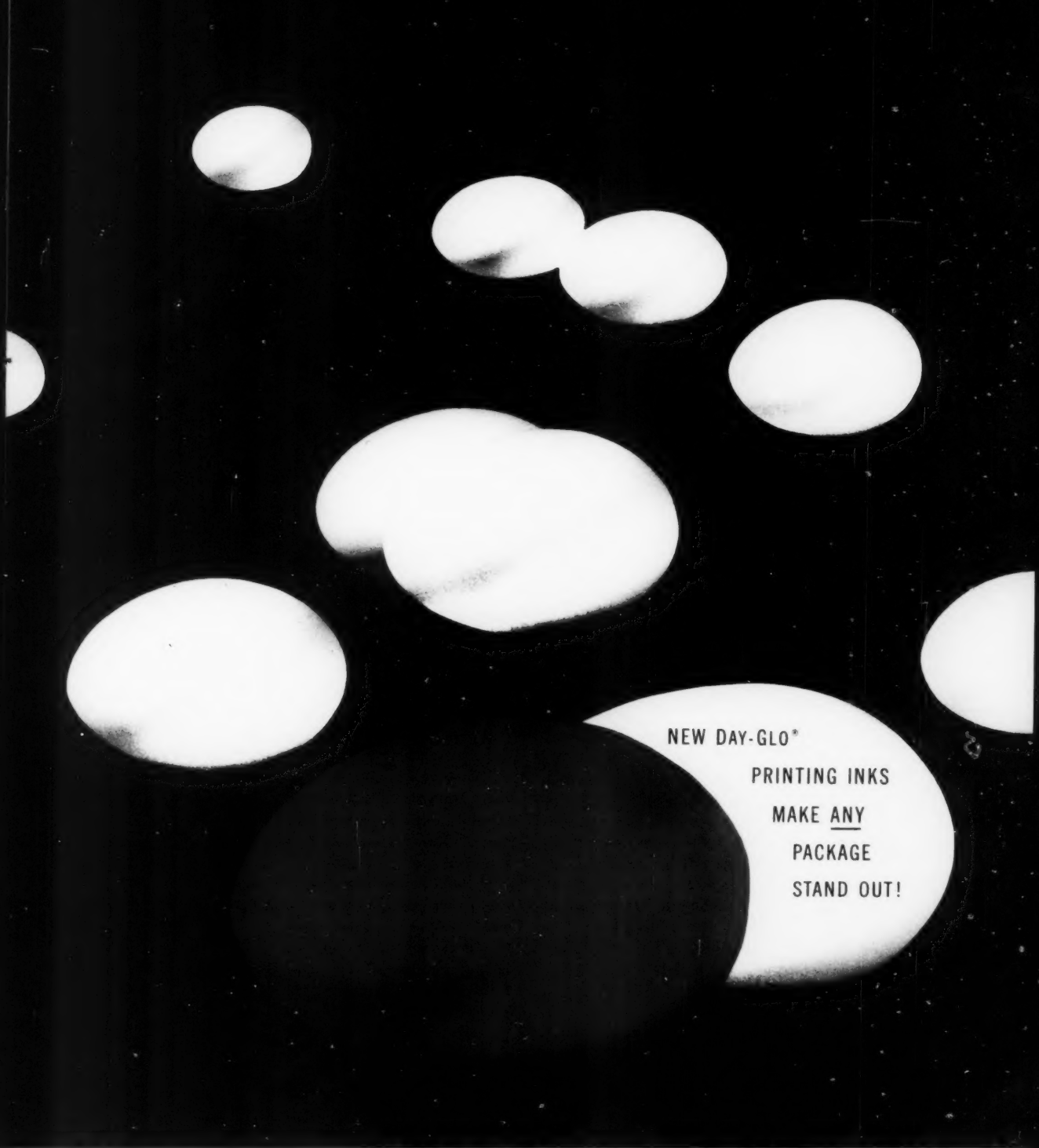
ENGINEERING CORPORATION

2100 N. Farwell Avenue • Milwaukee 2, Wis., U. S. A.



OVER 5 LBS. . . . which is nothing compared to the weight it carries with the Modern Packaging subscribers who use it day-in, day-out as a purchasing guide, production tool, business advisor and cost consultant. They honestly swear by it—it saves them so much time, money and trouble.

But how about you? Are you taking full advantage of all the exceptional help this new book has to offer?



Now you can add extra impact to any package with new DAY-GLO printing inks. These clean, eye-catching fluorescent colors stop more shoppers because they're far brighter than the brightest ordinary printing inks. They also add extra impact to point-of-purchase displays, labels and short-term posters.

Genuine DAY-GLO printing inks are easy to use, too. Even on long, high-speed production runs they print just as easily as ordinary inks. So for best results and highest quality, always insist on genuine, tested DAY-GLO printing inks. Available in six brilliant colors for either letterpress, litho, flexographic or gravure. Write today for name of your nearest distributor.

SWITZER BROTHERS, INC.
4732 ST. CLAIR AVENUE • CLEVELAND 3, OHIO
Dealer inquiries invited!

Taste excitement sells on sight!

A message of significance
for anyone who buys or uses cans—

Bliss is now designing, building and equipping complete can plants

E. W. BLISS COMPANY has so expanded its facilities and staff that it is now offering *complete* plant-building service to can users and manufacturers.

This "turn-key" plant concept means that we can provide a customer with everything he needs—from a survey of the economic advantage or disadvantage of operating his own plant right up to building it, equipping it, training his personnel, and getting the entire operation underway as smoothly as possible.

We will either take complete responsibility for design and construction, or work with a specialized consulting engineering firm, adding to the consultant's specialized talents Bliss' own personnel, manufacturing facilities, and long familiarity with and experience in the can manufacturing field.

For *users* of cans, the implications of this entirely new service is obvious. And the service is no less meaningful for can *manufacturers:* The regional plant—is it practical, is it economically feasible?

If you're seriously considering moves of this kind, Bliss' new "turn-key" concept deserves your thoughtful consideration. We'll be glad to talk out all the details with you. A number of our executives will be available at Bliss' booth during the Canner's Show, Atlantic City, this coming January. Or if you prefer, drop us a note, and we'll arrange an appointment at your convenience.

Bliss is more than a name... it's a guarantee

BLISS
SINCE 1857

E. W. BLISS COMPANY
Can Machinery Division
Canton, Ohio

Taste excitement sells on sight!

• • • Get extra *impulse* sales for your food products with the sell-on-sight *emotional* impact of Taste Excitement wrappers . . . the proved Western-Waxide package design concept that sells the shopper's *subconscious* mind! Taste Excitement is the scientific blend of color, brand identification, and mouthwatering serving suggestions. It gives your food products a "package personality" that *stands out* and *sells* on crowded supermarket shelves.

But remember that modern package design is a science. To put sales boosting Taste Excitement wrappers on *your* food products, bring your packaging problems to Western-Waxide . . . or consult a qualified independent package design expert.

Increased Sales . . . by Design!

Manufacturers or converters of plain and printed waxed paper; foil; foil laminates; polyethylene coated paper and poly-film laminates; films; bags; pouches and other specialized packaging materials.

CROWN ZELLERBACH CORPORATION

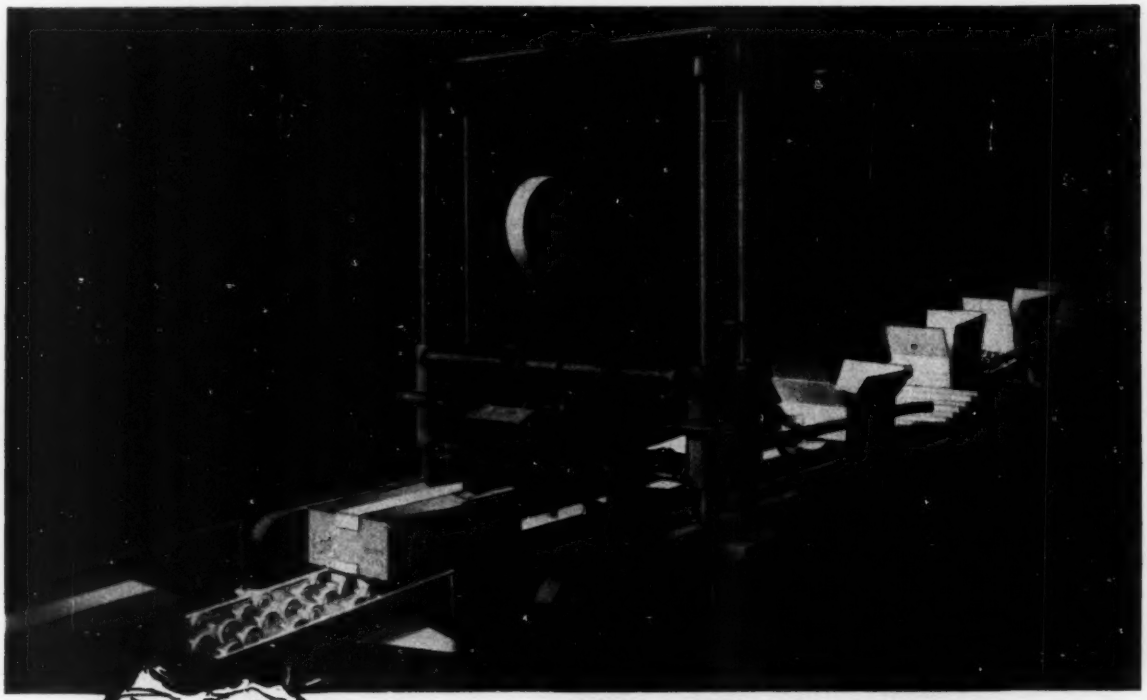
WESTERN-WAXIDE SPECIALTY PACKAGING DIVISION

PLANTS AND SALES OFFICES: SAN LEANDRO AND LOS ANGELES, CALIFORNIA • NORTH PORTLAND, OREGON • ST. LOUIS AND KANSAS CITY, MISSOURI
SALES SERVICE OFFICES: Akron • Atlanta • Chicago • Cincinnati • Dallas • Denver • Memphis • New York City • Omaha • Salt Lake City • Seattle • Spokane

© CZ-1330C-WW

Only Machine that Automatically Tapes Over 2000 New or Re-use Cartons Per Hour

...and reduces labor costs as much as 80%, too!



Only the WAGNER M-20 Can Guarantee Performance Like That

And look at just a few of the other features built into every Wagner M20—

1. Adjusts to any carton size in a matter of seconds, not minutes.

2. Proper tape length cut automatically, assures neat cartons every time.

3. Exclusive wipe down and compression assembly.

4. Rugged construction assures many years of trouble-free service.

It will pay you well to get complete information about the most modern taping machine on the market today.

waqner M-20 TAPING MACHINE

MAIL COUPON TODAY FOR FULL INFORMATION

WAGNER IRON WORKS
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Milwaukee, Wisconsin

WAGNER IRON WORKS
Milwaukee 1, Wisconsin

Please send complete information about the Wagner M-20 Taping Machine

NAME .....

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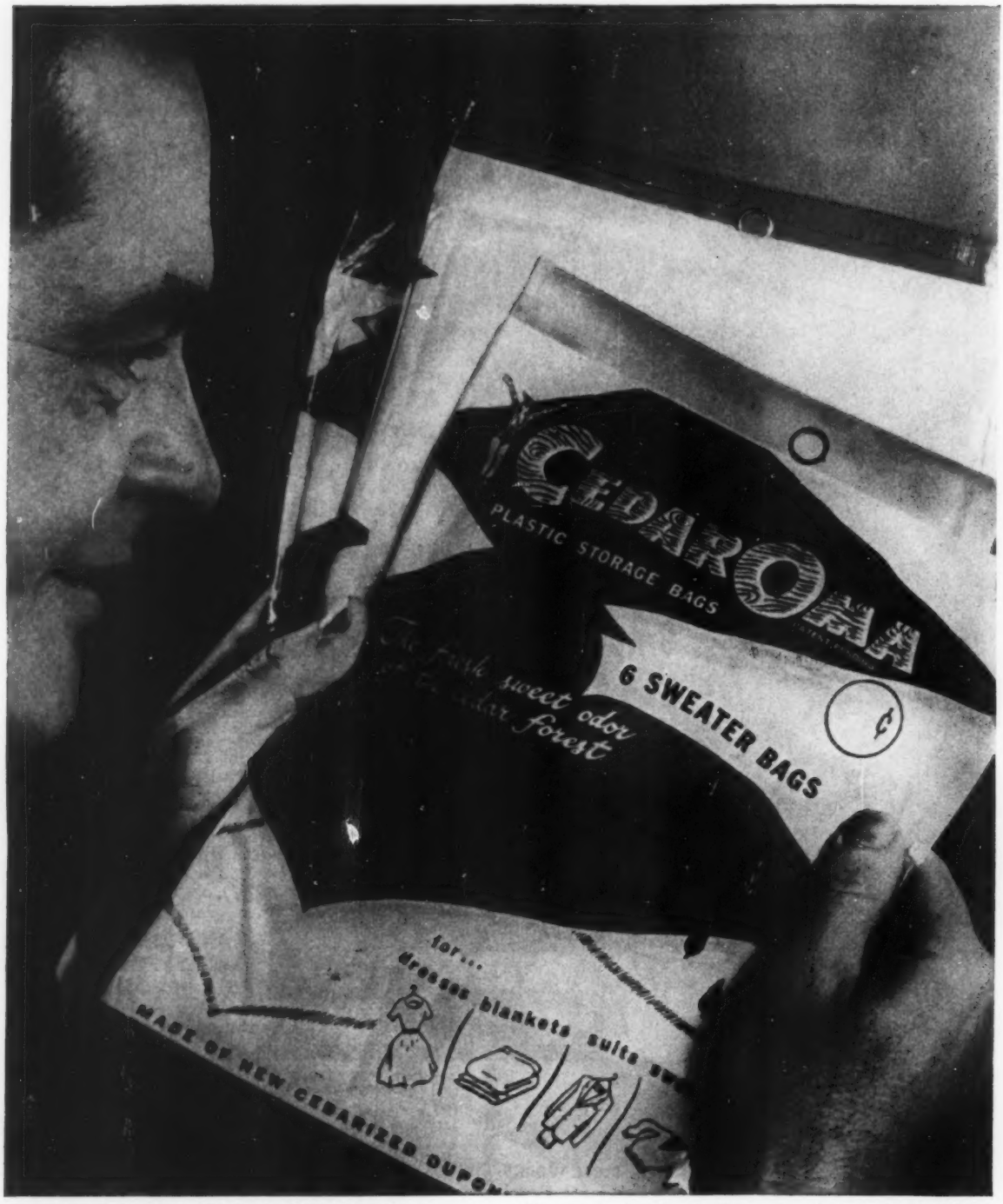
CITY .....

TOP AWARD WINNER OF 1957

"CedarOma" package



Marketing Appeal of the family of "CedarOma" packages is proved by repeat orders from leading variety chains and rack jobbers. A "K" cellophane package can help win the highest award—consumer acceptance—for your product, too!

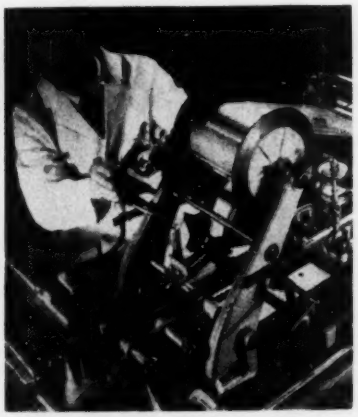
demonstrates the outstanding advantages of

DuPont "K" Cellophane

Superior Protection — "K" cellophane provided "CedarOma" with the ideal film to seal in cedar odor with which the plastic garment bags are impregnated.

Extra Durability — "K" cellophane met "CedarOma's" requirement for a package that could withstand rack jobbing . . . rugged shipping and handling.

Extra Brilliance — "K" cellophane gave the "CedarOma" package a "quality look" . . . its extra luster, *plus* transparency, provides a powerful selling combination!



Efficient Production — "K" cellophane . . . like other Du Pont cellophane films . . . speeds through the fastest packaging machinery . . . heat seals securely.

CedarOma's smartly designed and colorfully printed package for its plastic garment bags recently won "Best of Show" in the National Flexible Packaging Association Competition. Made from Du Pont K-202 cellophane, the package illustrates why more and more packagers who desire superior appearance, protection and durability are switching to the sparkling "K" films.

Check over the specific advantages of "K" cellophane. Compare them with your needs. See if a "K" package won't do a better sales job for your quality products. Talk it over with your Du Pont Representative or Authorized Converter. He'll be glad to provide information you'll find helpful. E. I. du Pont de Nemours & Co. (Inc.), Wilmington 98, Delaware.

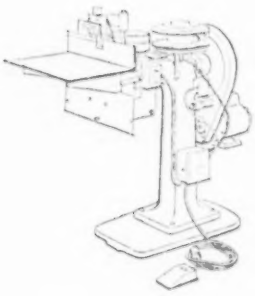
DU PONT
REG. U. S. PAT. OFF.

BETTER THINGS FOR BETTER LIVING
. . . THROUGH CHEMISTRY

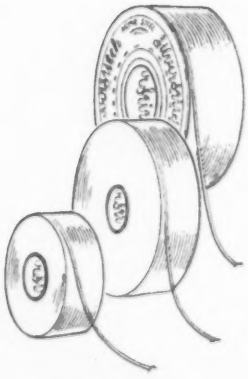
DU PONT cellophane

CLOSURE IDEA BULLETIN

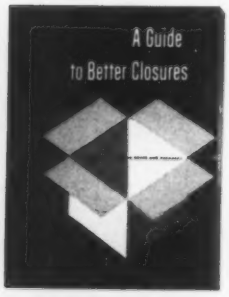
For Users of Fibreboard Boxes



Acme Steel Model HOHT Silverstitcher closes both tops and bottoms of loaded full overlap boxes efficiently and securely. A penetrating power-driven clincher enters at the box edge behind both flaps, forms a secure stitch and retracts automatically. Model HOHT is particularly effective in closing long, narrow boxes economically. Model HOHT also fastens 5-panel folders and some double and triple slide boxes.



The gauge accuracy and smoothness of Acme Steel Silverstitch Stitching Wire prolongs machine life and precise level winding promotes smooth, high-speed feeding. Insure extra life and steady production for your stitching machines by ordering Acme Steel Stitching Wire in 10, 25, or 50-pound coils.



Arcuate Wire Stitching, an advanced method developed by Acme Steel, greatly increases the driving strength of stitches. Arcuate gives you trouble-free, continuous stitching ...with minimum machine adjustment...even under hard usage and sustained high-production operation. And Arcuate can be ordered on all new machines or obtained with a simple conversion kit for older stitchers.

Acme Steel recently published an informative 20-page handbook, "A Guide To Better Closures", which provides a ready source of box closure data. Send for your copy.

Call your Acme Idea Man on any problem in closing boxes. Call him at the nearest Acme Steel office, or write: Dept. MDW-127, Acme Steel Company, Chicago 27, Illinois.

ACME STEEL WIRE STITCHING

LusterBoard
IS CUT OUT FOR THE JOB

Look at LusterBoard's mirror-smooth surface. Examine the way it weds itself to gloss and metallic inks. Then imagine your product wrapped in LusterBoard. Candy . . . cosmetics . . . First Aid products . . . foundation garments . . . lingerie . . . pharmaceuticals . . . photographic equipment . . . textiles . . . whiskey . . . beverage cartons . . . food . . . whatever category your product falls into, LusterBoard will present it favorably. Here are a few of LusterBoard's advantages:

- ★ So strong that laboratory tests prove that its strength equals or surpasses boxboards two to four points heavier.
- ★ You get fidelity of halftone reproduction obtainable on no other board.
- ★ Fast ink setting and drying, making LusterBoard ideal to print and handle.
- ★ Lusterkoted surface (not laminated) applied directly to high grade white board.
- ★ Smooth folding and superb embossing effects.
- ★ Range of 14, 16, 18, and 20 point thickness.

Samples, demonstration pieces, and technical information are available from LusterBoard headquarters:

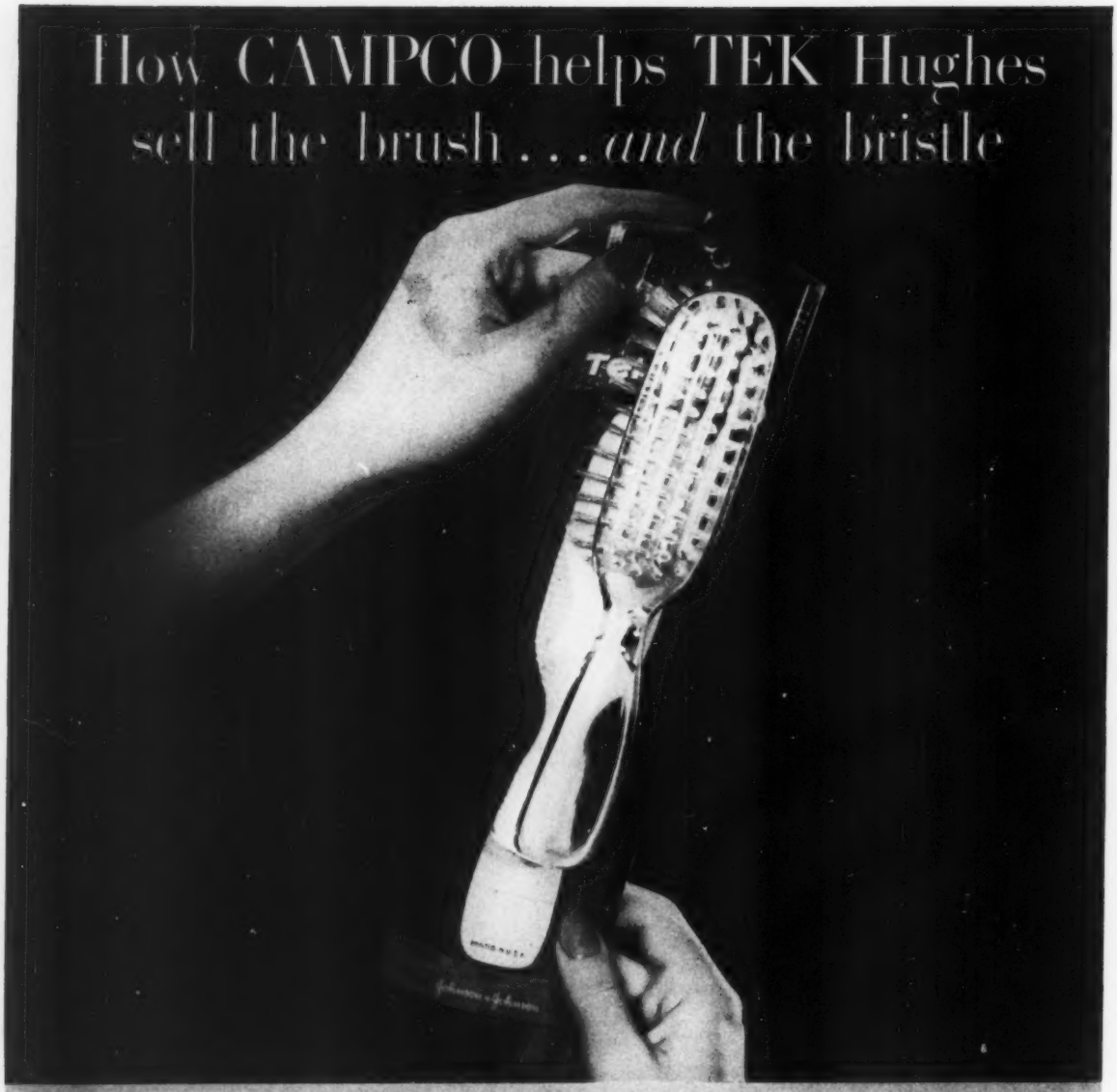
S. D. Warren Company, 89 Broad St., Boston 1, Mass.

Warren's HIGH STANDARD
Printing Papers

WARREN'S LusterBoard

J. Wiss & Sons Co. have selected 20 point LusterBoard for their gift packaging of high grade manicure sets and scissors sets.

How CAMPCO helps TEK Hughes sell the brush . . . *and* the bristle



PLAXALL INC. capitalizes on CAMPCO butyrate for unique packaging technique

EXTREME COMPATIBILITY of Campco butyrate means package won't discolor products made of other plastic materials. Flexibility permits pattern embossing, deep-shoulder hole-punching. Note excellent optical clarity of the package.

The package that invites product inspection sells best – particularly if it also assures immaculate display. Example: Tek Hughes' (a Johnson & Johnson Company) new hair brush line. Bidding for buying action, each brush displays nicely on counters, in merchandise racks, or on walls, yet permits full slide-out examination by the buyer.

Thanks to uniformity of Campco butyrate which, though essentially rigid, may be flexed under pressure, the package is produced in an automatic continuous process. The contour dome is pressure formed at speeds of up to 90 per minute. It is then fed into the special "Slideplax" machine which turns the edges to produce the slide tracks.

Because of the extreme pliability of Campco butyrate, these packages can be deep-formed, patterned, and hole punched *without shattering, cracking or flaking.* Next time you want finger-tip sales appeal for your product, remember, it pays to use Campco sheet and film. Write today for details. While we do no custom fabricating we can recommend a source of fabrication in your area and can supply product design help.

CAMPCO *sheet and film*

a division of **Chicago Molded Products Corp.**

2718 Normandy Avenue, Chicago 35, Illinois

STYRENE • ACETATE • POLYETHYLENE • RIGID POLYETHYLENE
BUTYRATE • COPOLYMER STYRENE

In 1885 the First

HESSER PACKAGING MACHINE

was built – since then . . .
more than

650

German and foreign

PATENTS

have been granted.

This figure speaks for itself

and most effectively demonstrates the continuous development of **HESSER** designs, based on years of thorough experience in the packaging field.

If you have a packaging problem . . .

PLEASE CONTACT:

Geveke & Co., Inc. New York
Packaging Equipment Willowdale/Ontario
James C. Hale & Co. San Francisco
Los Angeles
Edward A. Wagner Dallas/Texas
Agencia Comercial Anahuac Mexico City

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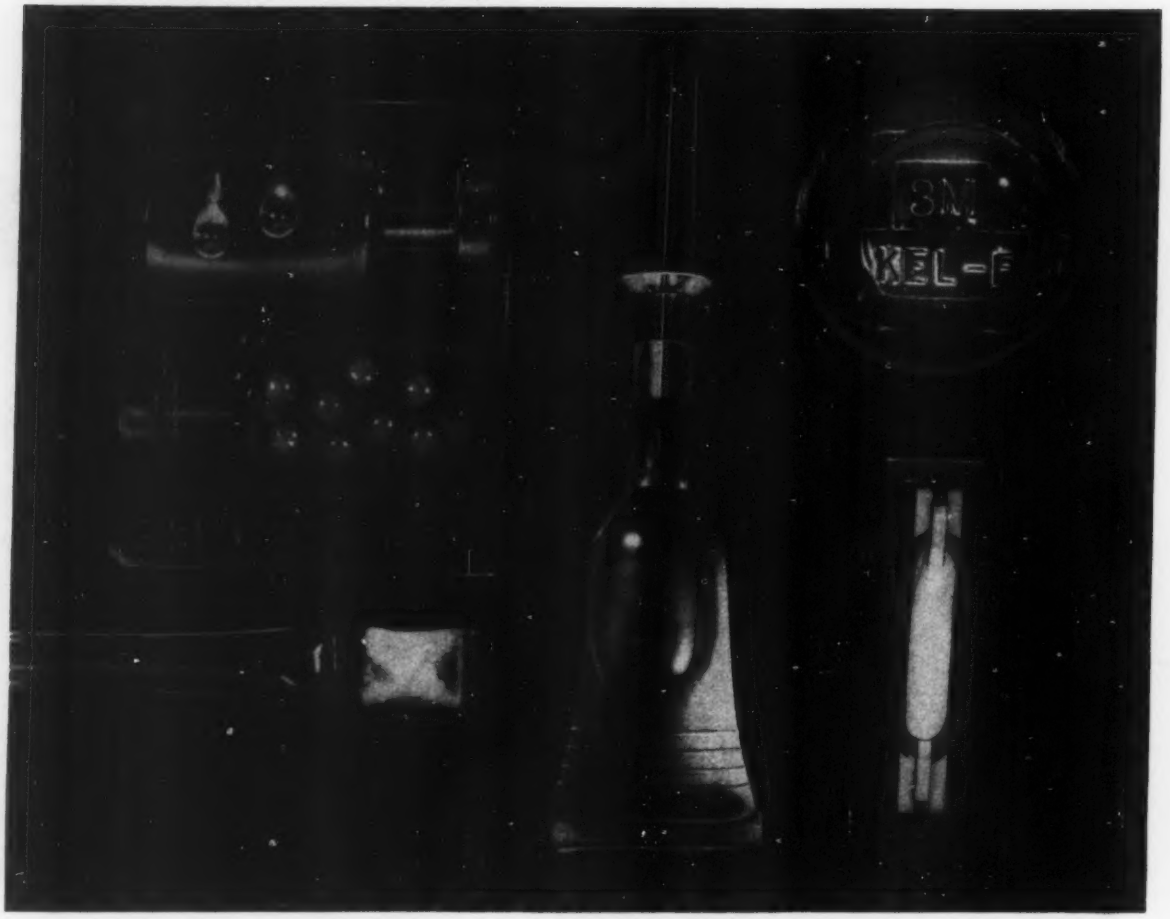
MASCHINENFABRIK-AKTIENGESELLSCHAFT STUTTGART-BAD CANNSTATT founded 1861.

3M Chemicals opening new worlds of use for film



Impermeable, inert KEL-F® *films create new packaging opportunities*

Now film packaging opportunities are unlimited for pharmaceuticals . . . and for many other types of products, too.

The reason? Radically new films and tubing made of "KEL-F" trifluorochloroethylene polymer. For the first time, "KEL-F" films open up to a broad range of pharmaceuticals all the advantages of film packaging.

Unplasticized, plasticized or radiant-resistant grades offer:

- **complete impermeability, even to formaldehyde and medical alcohol**
- **exceptional chemical inertness, safeguarding purity of package contents**
- **extraordinary anti-sticking properties**
- **ability to withstand radiant sterilizing of contents**
- **great strength and flexibility, plus resistance to age and both high and low temperatures**
- **ability to be heat- and radio-frequency-sealed**
- **exceptional clarity**

What's more, "KEL-F" films and tubing form packages that are shatter-proof, more compact and lighter weight.

No other film offers this unique combination of exceptional properties. Consider the unusual, new packaging opportunities they create for you!

Leading film producers make "KEL-F" films and tubing from "KEL-F" trifluorochloroethylene polymer (a 3M chemical product). Write for free information to: Chemical Products Group, Dept. WA-107, 3M, St. Paul 6, Minn.

JERSEY CITY CHEMICAL DIVISION • CHEMICAL PRODUCTS GROUP

MINNESOTA MINING AND MANUFACTURING COMPANY

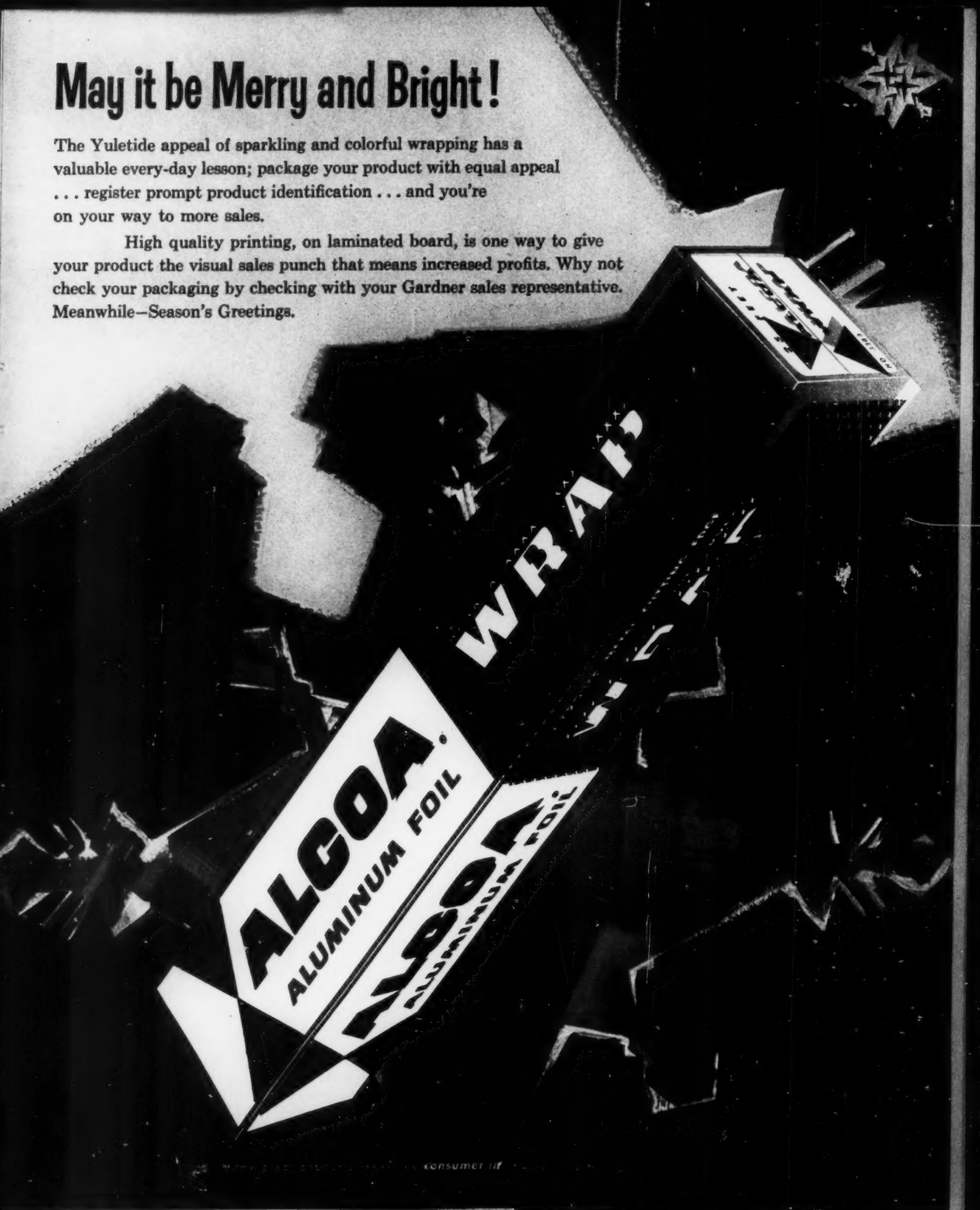
. . . where Research is the key to tomorrow

3M COMPANY CHEMICALS

May it be Merry and Bright!

The Yuletide appeal of sparkling and colorful wrapping has a valuable every-day lesson; package your product with equal appeal . . . register prompt product identification . . . and you're on your way to more sales.

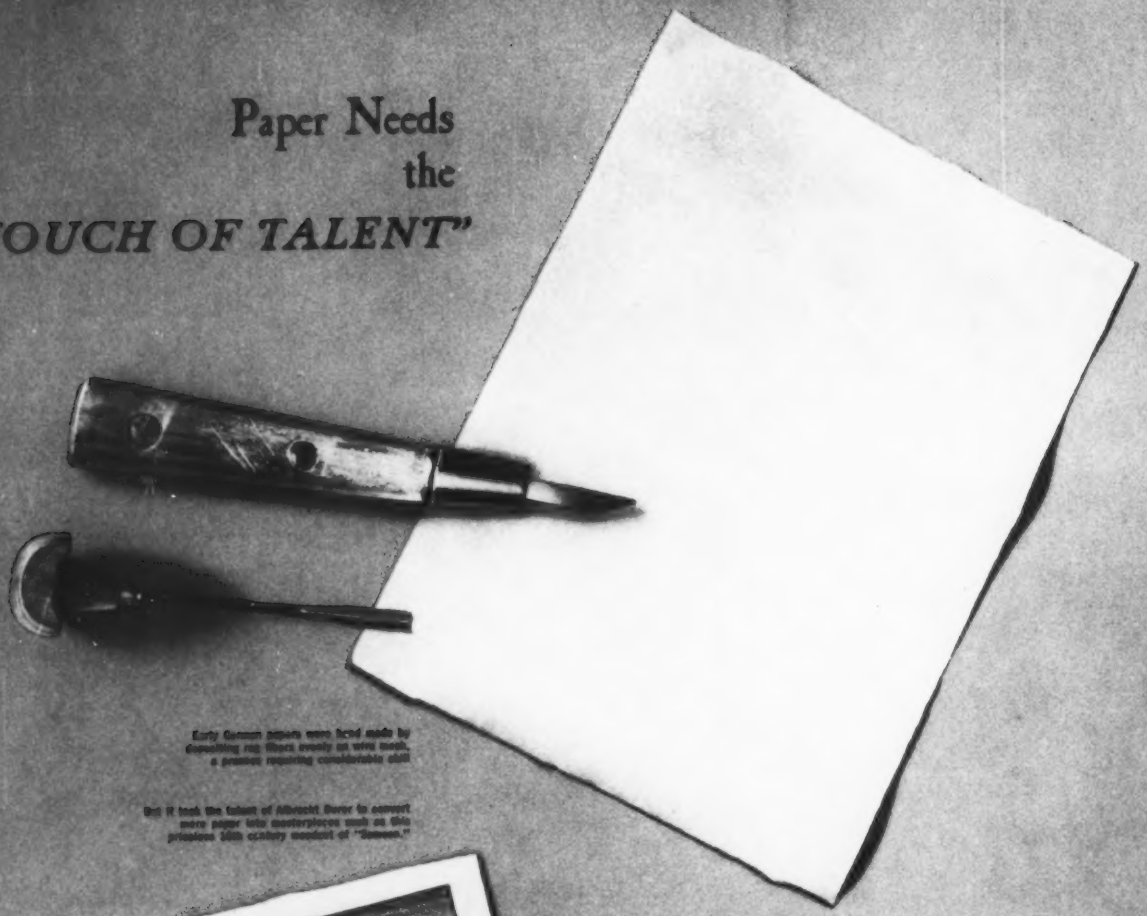
High quality printing, on laminated board, is one way to give your product the visual sales punch that means increased profits. Why not check your packaging by checking with your Gardner sales representative. Meanwhile—Season's Greetings.



THE GARDNER BOARD AND CARTON CO.

Middletown, Ohio

Paper Needs the "*TOUCH OF TALENT*"



Early German papers were hand made by dissolving rag fibers evenly on wire mesh, a process requiring considerable skill

But it took the talent of Albrecht Durer to convert mere paper into masterpieces such as this priceless 16th century woodcut of "Samson."

COURTESY: MUSEUM OF FINE ARTS, BOSTON

The effectiveness of a paper product depends upon the talent that produces it whether for display on a museum wall or on a super market shelf.

NASHUA *Corporation*

NASHUA PACKAGING TALENTS AVAILABLE TO YOU . . . Creative Design • Paper Chemistry • Package Engineering • Coordinated Packaging • Quality Production • Procurement Versatility . . . Nashua Corporation, Nashua, N.H.

MODERN PACKAGING

Vol. 31, No. 4 December 1957

Featured in this issue . . .

Does your package really sell?

In self-selection markets a package has just 10 seconds to do or die. So if your package doesn't measure up to self-selection requirements, you are missing out on a good potential market—and you are not getting maximum sales from your present markets. Such rack-jobber organizations as American Rack Merchandisers Institute and Toiletry Merchandisers Assn. know from first-hand experience exactly what constitutes a successful self-selection package. Their recommendations, given in this article along with case-history success stories, can be adopted and applied profitably by any packager of consumer products.

Don't miss "10 Seconds to Sell," p. 91

Wrapping-machine problems of polyethylene

Suddenly, polyethylene has displaced cellophane as the lowest-cost, heat-sealable, transparent packaging material. This development brings into sharp focus the biggest unsolved problem in packaging today: the failure of machine development to keep pace with the progress of plastic films. In this and succeeding articles, MODERN PACKAGING will explore this situation in depth—the economic factors which have brought it about, the technical nature of the problems and all the facts about what is being done and what will be done to solve them. Don't miss this series.

Read "What About Polyethylene?" p. 98

Packaging economies of a new web splicer

On Birds Eye's 195-package-per-minute frozen-food lines, a new web splicer automatically changes and registers printed rolls of wax paper, cellophane and foil, attaching the new web to the last panel of the depleted roll with a strip of pressure-sensitive tape, eliminating down time. This compact new unit, the company finds, releases at least one service man from multiwrapper packaging lines, saves 15 to 20 overwrap panels per roll and frees the wrapper operator for wrapping adjustments. In addition, it assures a reduction in waste production time that pays for the splicer in a little more than two weeks. To find out more about how this General Foods division is using its web splicer to effect packaging economies,

Turn to "Flying Splicer for Overwraps," p. 102

Now it's the small economy size

In this day of the giant family-size package, Carter's Ink Co. does an about-face and markets a customer-convenient 1-oz. bottle of ink to sell for 10 cents. (Traditionally, ink bottles hold two fluid ounces, sell for 15 cents.) The company's new Demi-Jar, with a handsome "desk accessory" look and nine ink colors to choose from, is designed to spur impulse and multiple buying, give dealers more rapid turnover and higher profit per sale. For the full details of how and why Carter's is betting that half as much will sell more than ever before,

Read "Demi-Size Inks," p. 114

Squeeze containers: The only way to move is up!

This is how fast a packaging industry can grow: In the 10 years since the first polyethylene squeeze bottle bounced into the market, annual production has soared to 400,000,000 units—and even the most conservative forecasts call for a 200% increase in this figure

by 1960. But that's not the half of it: The term "squeeze container" is fast becoming a misnomer as this type of packaging poises on the threshold of developments that promise to make it the *most economical* package for a given job, without regard to any function other than that of holding and conveying the product. Some of the reasons: raw-material prices are trending downward; new types of polyethylene resins offer a vast new range of properties; new linings offer better protection.

See this month's Supplier Industry Survey, "Squeeze Containers," p. 106

A package designed for young moderns

Johnson's wax climbs out of the competitive glass-container groove with a colorful quart can featuring "mood packaging" design for its new rug cleaner, multipacked in a four-can holder. Mood packaging, says Johnson's, does a double selling job: It creates a memorable image in the shopper's mind; it is aimed for effectiveness in instances where consumer taste is a prime marketing factor. Hence, the company's new four-color-lithographed can carries a modern decorator design calculated to attract the attention of young, style-conscious housewives. And one can contains just enough cleaner for the small rugs most young housewives have in their homes.

See "Mood Packaging," p. 116

Lure for the fisherman

Florida Fishing Tackle puts stapling machines to work in its packaging operations to assure better in-store display of its fishing lures and to make them more attractive to anglers. The company uses an air-operated stapler to stitch elastic cord in loops to a colorful display card. Then fishing lures are packaged in transparent cellulose acetate tubes which are slipped through the elastic loops 12 to a card. Similar operations make for more efficient packaging of the company's other products. Added advantages: speed-up in production and packaging time all along the line.

Read about it in "Stitching for Display," p. 122

How to make 37 packages out of 3

Devising an ingenious new dispensing folding carton for its expanded nail line was only half the packaging solution for Sears, Roebuck & Co. On the nail-manufacturer's packaging line just three carton sizes, basically pre-printed, are converted into 37 different boxes, in four color codes and with specific content identity, by two-color imprinting using presses adapted from the greeting-card industry. Here's another striking example of how imagination and a willingness to search for ideas in other industries can solve seemingly insurmountable packaging problems. In this case it turned a loss item into a profit-making customer convenience.

Turn to "37 packages from 3," p. 128

PI's 19th Annual Forum draws record crowd

Reflecting management's increasing awareness of the fact that tomorrow's sales hinge largely on the solution of today's packaging problems, an all-time record gathering of 1,500 persons attended the recent 19th Annual Forum of the Packaging Institute in New York. During the three-day meeting, 60 paper were delivered at nine seminars, three luncheons, the annual members' meeting and the Institute's first annual Awards Dinner. For a complete report on the meeting, including a session-by-session summary,

See "Report from P.I.," p. 137

Pressurized-food packages: Promises and problems

The potential for food aerosols employing other than foam-type valves is enormous. But the problems are formidable. Among them: lack of approval for propellents other than compressed gases, consumer reluctance to accept foods in a "different" aerated state, lack of non-foam dispensing methods that offer good removal of product and consistent spray or stream patterns. Research now provides solutions to these problems for many products, and a method for non-aerated spray and stream dispensing is available that satisfies consumer demands and makes efficient use of compressed gases formerly considered useless. A technical report by Robert C. Webster.

Full details in "Pressurized Foods," p. 151

PHOTO COURTESY SPERRY SUPERMARKETS (KEY-FOODS)

Snap decision by supermarket shopper does more than make or break one sale of such non-food items as these soft goods. Rack jobbers who stock these shelves insist on packages that stop, tell and sell again and again. "If you don't have packaging, you don't have anything," they warn.

10 seconds to sell

In the lessons that non-foods are learning in the supermarket, there's much to be gained by every packager. Let the rack jobber tell you what self sell really means

In today's self-selection marketing, the package has 10 seconds to do or die. That's how long it takes the average shopper to make up her mind.

Nobody knows that better than the rack jobber. The men who service the non-food departments in supermarkets have become experts on what it takes to make a package sell and their know-how is pooled in such organizations as the American Rack Merchandisers Institute, Chicago, and the Toiletry Merchandisers Assn., New York.

Their packaging ideas, spelled out here, are based on practical sales experience.

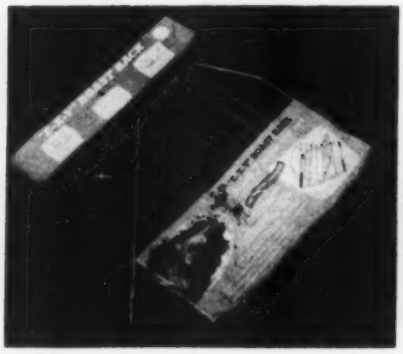
These ideas can be and should be applied to all self-selection packaging. They already have paid off for members serving retail outlets other than supermarkets.

ARMI, dealing primarily with housewares, has more than 400 packager and 44 rack-jobber members in the United States and Canada; TMA, an organization specializing in drugs and toiletries, rep-

SIX BASIC TYPES OF PACKAGING

PHOTO COURTESY WALTER FRANK ORGANIZATION

1 Box is one of six basic package constructions considered suitable for self-selection marketing by rack jobbers of American Rack Merchandisers Institute. This package, a development of Papercraft Co. for its Kaycrest brand gift wraps, reflects suggestions of rack jobbers. Now a 98-cent "trio" box of wrapping paper replaces conventional 25-cent package of 10-in.-fold gift wrap in supermarket outlets. Trio box and variations of it sell well in all markets.



2 Bag of polyethylene is used by Lynch-Jamentz Co. to display its E-Z-V roast rack. Header label, insert sheet quickly convey what product is, how it is used and price. This impulse-sales package with good product visibility opened previously untapped supermarket distribution.

3 Card technique must be handled properly to achieve sales success. Faucet strainer by Stanley-Oliver Mfg. Co. previously had card (left) that acted as a large tag and prevented readable display. New hang-up card with thermoformed section (right) has mushroomed sales. Product visibility, its use and price were incorporated in new package by packaging consultant who revamped package.

resents 140 packagers and 127 rack merchandisers.

This month TMA is putting its packaging theories on the line. It is testing toiletry sets designed to be sold in supermarkets. In 4,000 stores across the country, member jobbers have placed new Christmas display units to check for the first time the supermarket rack appeal of five major-brand toiletry products in gift packs. Success, says TMA, depends on the packaging.

Such reliance on packaging as the key to impulse selling in self-selection markets is, of course, basic to the current expansion of non-food categories in supermarkets. Well known to alert packagers are these facts:

- The original non-food supermarket items—housewares—have been joined by such other products as toiletries, school supplies, phonograph records, costume jewelry and small electrical items.
- Since the war, supers have increased their non-food sales at a faster rate than their food dollar volume.
- Because smart packaging is winning more shelf and display space for non-foods in supers, many variety, drug and department stores are demanding more efficient modern packages to speed self selection and hold their traditional share of the consumer dollar.

Now that most retail outlets offer some self-selection, all sales-conscious retailers find that well-planned packaging can effectively help solve a remaining problem. Appealing packages can supplement sales forces that are understaffed during peak load hours and often are undertrained.

Biggest challenge for non-supermarket retailers is, of course, in health and beauty aids—sold today in almost every super—and housewares, stocked by more than 90% of all supers.

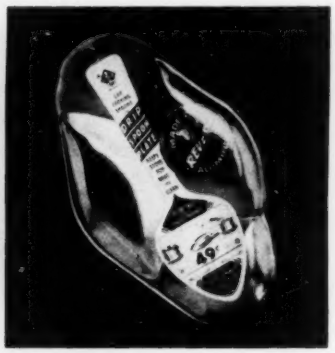
Thus, the influence of rack merchandisers and their organizations is growing because they supply many such packaged non-food items with which supermarkets are waging the retail battle. So, the packaging suggestions of these rack jobbers are significant for all packagers, designers and suppliers concerned with selling consumer goods.

ARMI

The American Rack Merchandisers Institute (ARMI), for one, believes the self-selection package must stop the customer, tell her and sell her in just three to 10 seconds. To do this, the package must, of course:

THAT HOUSEWARES JOBBERS LIKE

4 **Sleeve** of acetate took can opener of Vaughan Mfg. Co. out of closed package used for hardware trade and put it on sparkling display. Package does well in all outlets. Gift suggestion is added by seasonal pressure-sensitive label. Customer can remove perforated price area to leave Christmas greeting. Complete label can be removed after Christmas to eliminate outdated packages.



5 **Label** can be effective on hang-up and display items. This one for G & S Metal Products Co. not only conveys information about drip spoon plate, but its spoon shape immediately suggests just what the product is for.

6 **Tag** is perhaps less used than other five basic types of supermarket non-food packages. It is suitable for bulky or difficult-to-package items. Display of chains hanging on pegboard is not impaired by informative labels like the one illustrated here.

1. Quickly inform the customer what the product is.

2. Show her what it will do.

3. Tell her how much it is.

"We don't have the ultimate answer on all packaging problems," says L. Bowden DeForest, ARMI's executive vice president. "But we do know whether a package will or won't sell in our markets."

A critical examination of how this organization functions and the reasons behind its very positive attitude should prove instructive to all packagers.

ARMI is a seven-year-old, non-profit organization whose 444 members make or distribute everything from automotive items to women's hosiery.

The institute's jobbers have always emphasized packaging. "If you don't have packaging, you don't have anything," says one member. ARMI classifies packages in six categories: Box, bag, card, sleeve, label, tag.

Use of one or a combination of these depends on product size, shape and physical characteristics. It's important, too, that packaging cost fit product value.

Because ARMI rack jobbers insist on effective packaging, they offer several services for manufacturers. They will test market a package and pinpoint its weaknesses. Each new item handled by a jobber is noted on a weekly information report to ARMI headquarters that stresses packaging functions. "Hot sellers" are reported weekly on a pink postcard and are summarized in a weekly bulletin to members, though many jobbers notify other jobbers immediately they find a fast seller on their hands.

At ARMI's semi-annual meetings, top manufacturer executives consult with or sell to heads of rack-jobbing firms in confidential sessions, obtaining valuable packaging suggestions and merchandising ideas during such conferences.

From such up-to-the-minute advice have come practical guides that have proved worthwhile in thousands of packaging applications.

Here are points on which ARMI rack jobbers have acquired a packaging "sixth sense:"

1. *Product visibility.* To tell the customer what the product is, make it visible. If it is subject to damage and soil from handling, seal it behind a strong, transparent material.

For the hardware trade, Vaughan Mfg. Co. had packaged a can opener in a box within a box, protecting the product, but making it hard for the customer to examine it. Now a supermarket package does both a protective and selling job. The product is in an acetate sleeve with a firm paperboard base and top. The customer can see at a glance what the

can opener looks like and can examine it from all angles without the necessity of having to take it from the package.

2. *In-use illustration.* To show the customer immediately what the product will do, picture it being used. The illustration should be simple, should quickly convey the idea and, if possible, should be multicolored.

*Admiral Photo Products Co., for instance, has gone to a hang-up card for its pocket-sized slide viewer, incorporating a line drawing on the card to show clearly how the product is used.**

3. *Clear pre-pricing.* To tell the customer what it costs—often the strongest persuader—put price where she can see it. Don't use red or green price marks because this confuses and slows down checkout girls for these reasons: Non-foods are rung up as grocery-department items, which should be priced in black or blue ink; red pricing indicates a meat product, and green indicates produce. Make sure the price mark is large enough to be easily readable on the package.

4. *Punchy, "wrap-around" copy.* To communicate product information rapidly to the customer, make copy short and descriptive. Pertinent product information should run on all sides of the package so it will be visible no matter how the package is stacked or displayed.

5. *Built-in handling and anti-pilferage protection.* To make your self-selection package stand up under repeated handlings and still look good to the ultimate purchaser, product should be firmly secured to package and loose items can be held together in a thermoformed package; small articles should be carded or otherwise packaged to discourage pilferage. Seals and coverings must withstand attempts by any pilferage-prone customers.

Scripto has a new hang-up card for a ball-point pen that permits the customer to test the pen without removing it from the card. The bottom half of the pen projects downward from the card so it can be tested, but cannot easily be slipped into a shopper's pocket.

6. *Correct package size.* To make maximum use of valuable shelf area, packages must be compact, yet large enough to keep pilferage to a minimum.

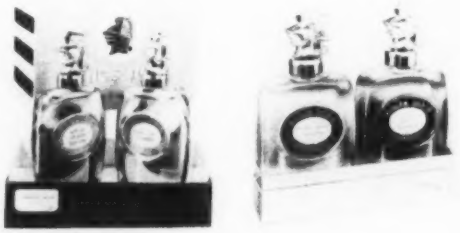
The Papercraft Corp., Pittsburgh manufacturer of gift wrappings, showed a new wider curling ribbon to a rack jobber at a recent ARMI person-to-person conference. His reaction: "This is only a 25-cent package?" So a larger package was developed and consequently became a fast seller.

7. *Hang-up hole of* $\frac{5}{16}$ in. This may seem a minor point, but it is important. Rack jobbers want all hang-up holes at least $\frac{5}{16}$ in. in diameter. Some fixtures, of course, require this size. Though smaller holes may work on many hang-up displays, they

* See "Trap Door Blister," MODERN PACKAGING, Sept., 1957, p. 119.

THE TOILETRY JOBBERS'

Transparent acetate window of new Mennen folding carton for supermarkets (lower) contrasts with completely opaque box for drug trade (upper). Inside tray is simply the bottom of set-up box for the drug trade. *Folding box by The Nevins Co., set-up box by Niagara Box Co., Inc.*



High visibility is offered in supermarkets by new Kings Men set-up box using cellulose acetate lid (right) to replace covered box for other outlets (left). *Set-up box by Globe Paper Box Co.*

Presentation effect of new April Showers folding box with transparent film window (below) gives greater display visibility in supermarket test than did the former package (not shown). *Package by House of Harley, Inc.*

slow the work of the rack serviceman. Frequently small-hole headers are torn and mutilated, resulting in returns.

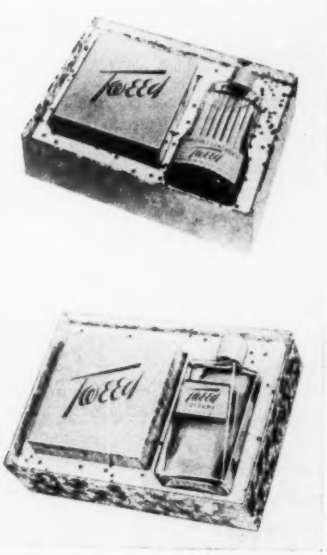
Wanted: packages that sell

Coming up with the right combination of packaging ingredients for the self-selection market can be very profitable for the alert packager. Not only will merchandise move quickly in supermarkets, but also in other outlets. ARMI rack jobbers never ask for an exclusive package for their use. They *do* insist on packages that sell.

The Stanley-Oliver Mfg. Co. of Chicago faced an extremely tough competitive situation for its faucet strainer: 90% of the market was taken by another brand. The firm called in a packaging developer spe-

IDEA OF GIFT SETS TO SELL ON SIGHT

First test of supermarket potential in toiletry gift sets is now under way with this rack, developed by TMA, and placed and serviced by member jobbers in 4,000 supers. Key to test is new packaging by most of four participating manufacturers. *Display by Einson-Freeman Co., Inc.*



Fitted lid of cellulose acetate in new Tweed set-up box for supermarkets (lower) is designed to do better job of keeping items in place than did former loose transparent cover (upper). Specially designed ridge inside paperboard tray holds lid. *Formed acetate cover by Plastofilm, Inc.*

No change for supermarket display was made in this Cutex package of molded polystyrene. Lipstick is fitted to lid, which is taped to base. All nine items can be clearly seen by shopper.

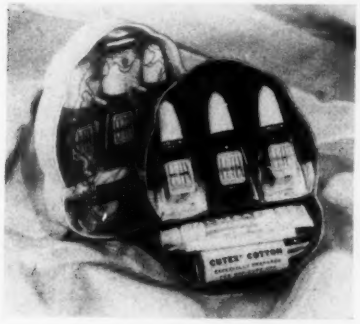


PHOTO COURTESY WALTER FRANK ORGANIZATION

Anti-pilferage protection is built into this hang-up card for supermarkets. Shopper can try pen without removing it from card to which it is fastened with double-strength reinforced tape. Card can be used on counter display, hung on rack or jumbled in bin-type display.

cializing in self-selection packages, a specialty that may become more widespread. The consultant discarded a card that slipped onto the strainer and packaged it on a hang-up card vacuum formed on both sides to display the strainer in three dimensions. Though the package costs about 2 cents more a unit, sales have risen at a phenomenal rate. The company now is flooded with orders and has a stronger position in the field.

Papercraft gives much credit to ARMI thinking for moving its Kaycrest brand from 10-cent items to $1 and $2 items. "Packaging has done it for us," says a spokesman. "Based on our packaging successes in supermarket outlets, our salesmen have proof of our packages' worth and can more easily sell the conservative outlets for gift wrappings. If our package is good for ARMI servicing, it's good for all our retail markets."

PHOTO COURTESY WALTER FRANK ORGANIZATION

From window box to card was wise move recommended by consultant for Stanley-Oliver Mfg. Co.'s bathroom deodorizer. Blister card displays product better; copy and illustrations have been greatly simplified. New package has boosted product's sales. Directions appear on back of card.

TMA

The country's major toiletry merchandisers share these strong views about the key role of packaging in self-service retailing, today's pace setter. Says the Toiletry Merchandisers Assn. executive secretary, J. B. Brewer: "I believe manufacturers just don't recognize the problems and potential sales in self service. They spend millions of dollars to improve production and millions for advertising. But how many have spent much to analyze self-service problems and then to package accordingly?"

Packaging people, he thinks, must do a better job of selling the importance of packaging to advertising agencies.

"They're not ad agencies any longer; they're marketing agencies. As such, they owe it to their clients to advise them on packaging. To do so, they must realize the potential of self-service stores—and there are a lot more self-service stores than just the supermarkets."

TMA lists two rules for good self-selection packaging:

1. *An easily handled unit.*

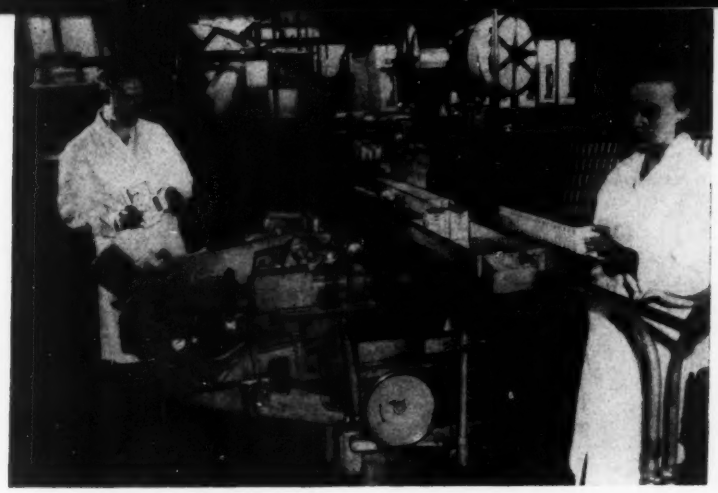
2. *A highly visual unit.* The prospective buyer must be able to see what she's getting for her money—it has to be a good buy. Supermarkets, says Brewer, are known for their bargains. So self-selection non-food items must look like bargains. "And remember," he adds, "there's no clerk there to tell her or sell her. The package has to sell itself. It must demand attention on display."

Those were the two criteria TMA used in asking toiletry manufacturers to join its initial Christmas display test. Objective: "to get our people into the Christmas gift-set business through supermarkets—the biggest foot-traffic areas in the world."

TMA developed a simple, vertical, corrugated-board, four-color display unit and invited four toiletry manufacturers already using gift-set packages in drug stores to create effective new packages for supermarket display.

Northam Warren Corp. (Cutex), Helene Curtis Industries, Inc., (Kings Men and Tweed), Cheramy, Inc., (April Showers) and the Mennen Co. agreed.

For this test, Mennen "opened up" its package of foam shave, skin bracer and deodorant. Its regular unit for the drug trade is [*Continued on page 224*]



Space-saver American-made machine occupies less than half as much space, costs one third as much as foreign machine. Blanks are fed from hopper (left). Foil and paperboard are wrapped around mandrel, forming shelf in which cigarettes are deposited to complete package.

Simplified cigarette boxer

Industry watches Viceroy's use of American-made unit that produces flip-top package with many economies

Careful examination of hard-box "flip-top" cigarette packages for Viceroy now on the market disclose two different constructions. One consists of a blank die cut all in one piece with one side seam. The other has two side seams and is constructed of two pieces—an inner frame board and an outer box blank.

The package of one-piece construction is the first for a major filter-tip brand to be marketed from a hard-box packer of American manufacture, developed as an attachment to existing soft-pack-cigarette-packaging equipment. After extensive testing, Brown & Williamson Tobacco Corp. is now operating these machines in its Louisville plant, apparently right alongside the original British machines which use the two-piece blank.[1]

The American units reportedly are operating at Brown & Williamson at the same 120-packs-per-minute speed as their British cousins and may prove capable of higher rates. With the present popularity of the "flip-top" box in cigarette packaging, the innovation is being watched by the entire industry, for several reasons.

- The attachments reportedly cost one third as much as the imported machine.
- Plant layouts need not be re-arranged; the American hard-box packer is attached to regular standard packers now in production.
- The combined machine requires only 36 sq. ft. of floor space in comparison with 80 sq. ft. for foreign machines.
- Only one operator is required.

With the American machine, first the foil liner and then the paperboard blank are wrapped around a mandrel, forming a shell into which units of 20 cigarettes are deposited to complete the package, on much the same principle as the old soft-shell package. The British machine employs a straight-line folding mechanism which wraps the foil and the paperboard blanks around the assembled cigarettes lengthwise.

Supplies and services: *Hard-box cigarette packer by American Machine & Foundry Co., 261 Madison Ave., New York 16. Box blanks by Diamond Gardner Corp., Middletown, Ohio.*

One-piece blank is formed into flip-open box with inner frame integral to blank. Box has only one side seam, in contrast to two on boxes formed by other machines. Inner foil wrap is securely sealed, yet easy for the consumer to remove.

[1] See "That Cigarette Box," Modern Packaging, Jan., 1956, p. 91.

INTRODUCING A SERIES

What about

Suddenly, the film has become
the lowest-cost transparent overwrap.
Are machine makers ready to meet the demand?
We examine the problem
and its implications for all packagers

The biggest unsolved problem in packaging today is the failure of machine development to keep pace with the progress of plastic films.

The film industry has accused the packaging-machinery industry of failing to recognize opportunity. The machinery makers have said that they noticed no particular demand from their customers. And it's true that packagers, by and large, up to now have been content with cellophane operations for the great bulk of their transparent packaging.

All this is changing now, and for a very good reason: Suddenly, polyethylene has displaced cellophane as the *lowest-cost, heat-sealable, transparent material.*

Now packagers are clamoring for high-speed, fully automatic overwrapping machinery that will handle polyethylene film just as fast and efficiently as cellophane. Now machinery makers are beginning to put their heads together with polyethylene-resin and film producers to learn more about the machine-handling characteristics of this tricky plastic and see what can be done.

It does no good now to say that this situation should have been anticipated. The important fact is that the problem is now recognized and is being worked on.

In a series of articles, for which this is the introduction, MODERN PACKAGING intends to explore the background of this situation, outline the economic factors which have brought it about, examine the technical nature of the problems and bring out the facts about what is being and will be done to solve them.

Because polyethylene is by far the most important of the plastic packaging films today—in low price, in abundance of supply and in all-around performance—this discussion will be limited to polyethylene film. Because bag and pouch making are already commercially established, it will deal primarily with the far bigger, almost-untapped potential in the field of overwrapping. It is important to note, however, that (1) a solution of the wrapping-machine problems of polyethylene will undoubtedly be applicable to all other "soft" thermoplastic films and (2) the results of this work should lead to better and faster bag and pouch machines.

The divergent price trends that have led to the sudden interest in polyethylene as an overwrapping

In England, machine overwrapping and heat sealing of cigarette packages in polyethylene is already a reality. Carreras, Ltd., of London uses a 3-mil film and a modified American machine to achieve these tight, weld-seal overwraps on 10-pack cartons of Dunhill cigarettes.

polyethylene?

film are clearly shown by the accompanying graph. The trends should have been obvious a long time ago: *cellophane*, originally a high-cost material, difficult to make, now after 30 years built up to such efficiency of manufacture and such volume of use that further economies become almost impossible; *polyethylene*, basically made of abundant, low-cost materials, steadily improved and now after 10 years getting down to bedrock on price.

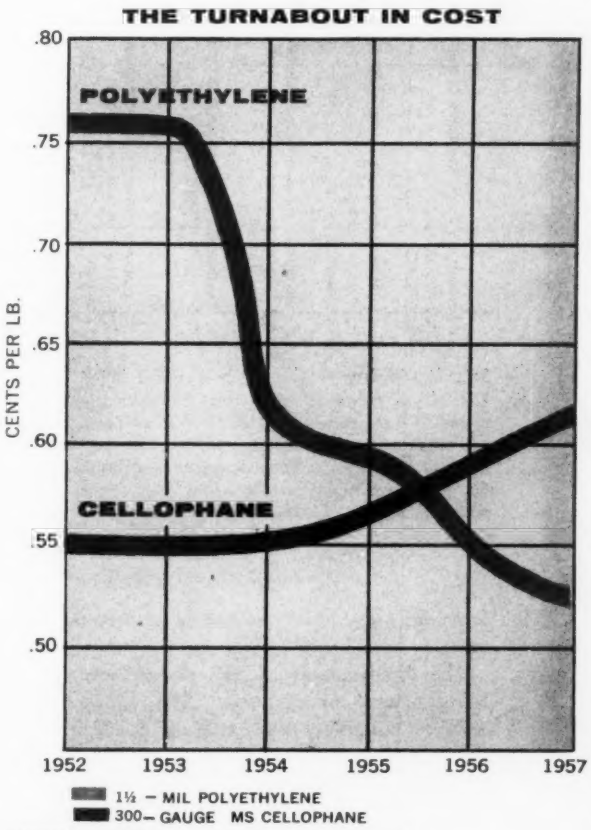
Cellophane and polyethylene are the inevitable comparison here because the really big-volume use we are talking about—simple overwrapping requiring reasonable transparency, mechanical heat sealability and durability—comes down to the plain question of price. As long as cellophane would do the job at 2 cents per pound less, there was no pressing demand for polyethylene. When their price curves crossed, in 1956, interest in polyethylene overwraps began to stir. Now with a price spread of 9 cents between MS cellophane and polyethylene and with emphasis as never before on packaging cost cutting, the choice becomes obvious.

This is not to say that cellophane should be counted out of the picture, or that other plastic films—polyester, saran, acetate, Pliofilm, vinyl and new ones still to come—will not have their place, even in overwrapping, wherever use requirements justify their higher price. It is to say only that in the big area of transparent wraps where price is the sole or primary consideration the trend is going to be to polyethylene—provided that the wrapping operation itself is equally economical and efficient.

No one need worry about the future of cellophane. It still has an edge over commercial grades of polyethylene in printability, sparkle, clarity and crispness, which are important to the sales appeal of many products; even in overwraps it will justify a premium price in such cases. More important, cellophane, through improved coatings,[1] is moving upward into an area of highly protective applications where plain polyethylene film cannot compete.

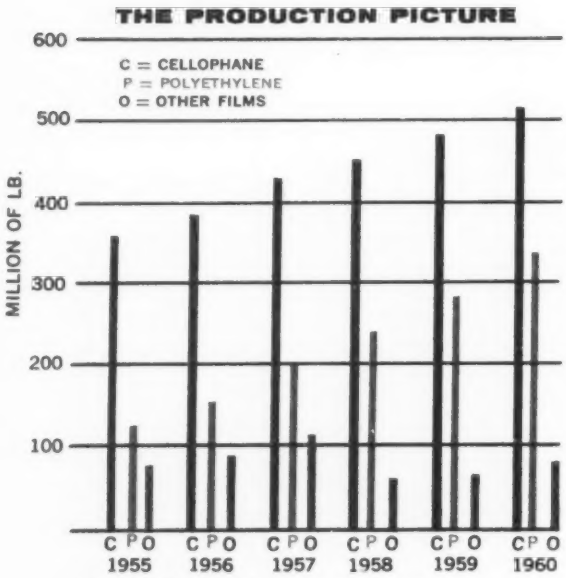
The reasonable expectation is that, when efficient overwrapping machinery is available for it, plain polyethylene will replace ordinary cellophane as the workhorse, utility film, while cellophane takes on new qualities and moves up the scale to challenge the more-expensive films, coatings and laminations.

Viewed in this light, polyethylene has some obvious advantages, in addition to price, as an overwrap material. It has greater strength and it has far longer service life because it does not dry out and embrittle as ordinary cellophane does. It has good (although not superior) moisture and water-vapor resistance. Unlike cellophane, it retains and even



Plunging price of polyethylene film crossed the rising curve for MS cellophane in 1956 and has now fallen 9 cents per pound below that of its competitor. Polyethylene has the advtantage, too, on unit cost—standing now at 0.027 cents per 1,000 sq. in. of 1½-mil film against 0.032 cents for standard 300-gauge cellophane overwrap film.

[1]See "Saran-Coated Films," MODERN PACKAGING, June, 1957, p. 151, and "A New Polymer-Coated Cellophane," MODERN PACKAGING, Jan., 1956, p. 139.



What will happen to cellophane and other films if polyethylene takes over the overwrap market? These projections indicate that all films will continue to grow, although polyethylene may grow at a faster rate. These bars represent total film production regardless of use. *Data from Monsanto Chemical Co. and other industry sources.*

improves many of its qualities at sub-zero temperatures.

The disadvantages of polyethylene are rapidly being reduced or eliminated. Clarity, printability and heat sealability have gradually been improved. Some recent pilot-plant samples of polyethylene film have exhibited almost the clarity and sparkle of cellophane.

With the development of high-density resins, the basic raw material is undergoing revolutionary changes, from which further improvements in film are certain to come. Right now, a polyethylene film can be produced with almost any desired quality—although not always with the desired combination of qualities for a particular use.

Originally, polyethylene film was not commercially practical in thicknesses below 1½ mils. Lately, large-scale commercial production has been edging downward to 1¼ and even 1 mil, and recently we have seen successful applications of 0.8-mil film.[2] The difficulty with the thinner gauges is in holding uniform gauge, but since this is not critical in most overwrap applications, there is a real prospect of economy far beyond that indicated in our price graph, which is based on 1½-mil film.

Why the emphasis on overwraps? A glance at the figures will show that this is (1) by far the biggest use of low-cost transparent film in packaging and (2) the area so far scarcely touched by polyethylene.

It is estimated that 70% of cellophane goes into overwraps and only 22% into bags. That indicates, on the basis of cellophane capacity existing and under construction, a near-term potential market for 332,500,000 lbs. of film in overwraps alone.

The use of polyethylene film just in packaging has jumped fivefold in the last four years—from about 30,000,000 lbs. in 1953 to an estimated 150,000,000 lbs. this year. The polyethylene industry is aiming at sale of 250,000,000 lbs. of film for packaging by 1960. To date, according to industry spokesmen, "almost every pound" of polyethylene packaging film has gone into bags, pouches and laminations—almost none into overwraps.

It is apparent that if polyethylene should take over even two-thirds of the overwrap market in the next few years—a reasonable expectation once the overwrapping machinery problem has been solved—this would require almost the entire available supply of all polyethylene film and the polyethylene industry, now haunted by fears of over expansion, would be forced into a major new expansion program.

What are the machine problems that are holding this up? Why has poly- [*Continued on page 226*]

Among the first in this country to show keen interest in polyethylene as a low-cost, highly transparent overwrap are paper-products manufacturers. These Bondware disposable plates, overwrapped and heat sealed on a new rotary-head machine, have just been marketed by the Paper Products Division of Continental Can Co.

[2]See "Lighter-Weight Polyethylene," MODERN PACKAGING, April, 1957, p. 92.

Round-the-world foods

Colorful, impressionistic packages for Seabrook gourmet line bring art to the supermarket to distinguish exotic frozen-food specialties

Water-color scenes of Italy, New York and France identify the country of origin of these frozen foods prepared from foreign recipes. Each carton holds a single serving, sealed in a cook-in-the-bag polyester-polyethylene film pouch.

With popular consumer demand in foods definitely trending toward the gourmet types, you can buy frozen chicken cacciatore in a supermarket in Rome, N. Y., as well as eat it in Rome, Italy. But how do you package such an item to let the shopper know she is buying something special?

Packages for Seabrook Farms' "Round the World Dining" series of heat-and-eat frozen foods are interesting examples for food processors eyeing this lucrative new merchandising approach.

Initially, Seabrook's new line includes two Italian and two French specialties; several dishes prepared from recipes featured at Luchow's famous restaurant in New York, and others, to be on the market soon, based on Maxim of Paris recipes.

All are single-service packages having an inner cook-in-the-bag construction, of the type developed two years ago for Luchow packages.[1] Each five-color-lithographed, bleached sulphite carton contains an individual serving of one item—such as Beef Bourguignonne, meat patty Bavaria or veal scallopini—in a polyester-polyethylene film bag which needs only to be dropped in boiling water and heated about 12 minutes. The single-service idea permits each member of the family to enjoy his favorite dish heated in its individual sealed bag in the same pot of hot water.

The design problem was to create a selling surface suitable for supermarkets, but distinctive enough to impress the shopper with the international character of contents.

Finally evolved were four basic package designs, each illustrating the geographic place of origin of contents: a French country scene for the French regional dishes; a Venetian canal vista to typify Italian; a view of the Champs Elysées symbolic of Paris, and Times Square for Luchow's New York.

The colorful artwork, done in water colors, is impressionistic, rather than realistic, to suggest the romance of world-famous cities and far-away places. The travel theme is continued in the handling of label information, incorporated in a panel resembling a shipping tag on the face of each package. Preparation data are on the back.

The water-color paintings, printed directly on the folding cartons, extend over the face, one end and part of the back. Cold wax coatings inside and out give protection and enhance the artwork.

Supplies and services: *Designs by Lippincott & Margulies, 430 Park Ave., New York. Water-color illustrations by Miriam Troop, 40 W. 55 St., New York. Cartons by Container Corp. of America, 30 S. Dearborn St., Chicago 3, and The Lord Baltimore Press, Inc., 477 Madison Ave., New York 22. Polyester-polyethylene bags by Standard Packaging Corp., 551 Fifth Ave., New York, and Continental Can Co., Inc., Shellmar-Betner Div., Mt. Vernon, Ohio., using DuPont Mylar polyester film.*

[1] See "The First Boilable Film Bag," Modern Packaging, March, 1956, p. 174.

Flying splicer for overwraps

Birds Eye cuts waste and labor with new machine that mechanically changes and registers rolls of overwrap paper on 195-per-minute frozen-food lines

Big savings in the cost of large-volume, high-speed overwrap operations are suggested by Birds Eye's use of a new web splicer that employs automatic precision to guard against machine stoppages.

In use at its Wayland, N.Y., frozen-foods plant, Birds Eye's compact new unit automatically and mechanically changes and registers printed rolls of waxed paper, attaching the new web to the last panel of the depleted roll with a strip of pressure-sensitive tape. According to Birds Eye, this action releases at least one service man from multiwrapper packaging lines, saves between 15 and 20 overwrap panels per roll and frees the wrapper mechanic to concentrate his attention on wrapping adjustments. In most plants, the splicer also assures a considerable reduction in waste production time—the resultant savings being enough to pay for the splicer in as little as 16 days. The machine is also applicable to cellophane, foil and plastic film overwraps.

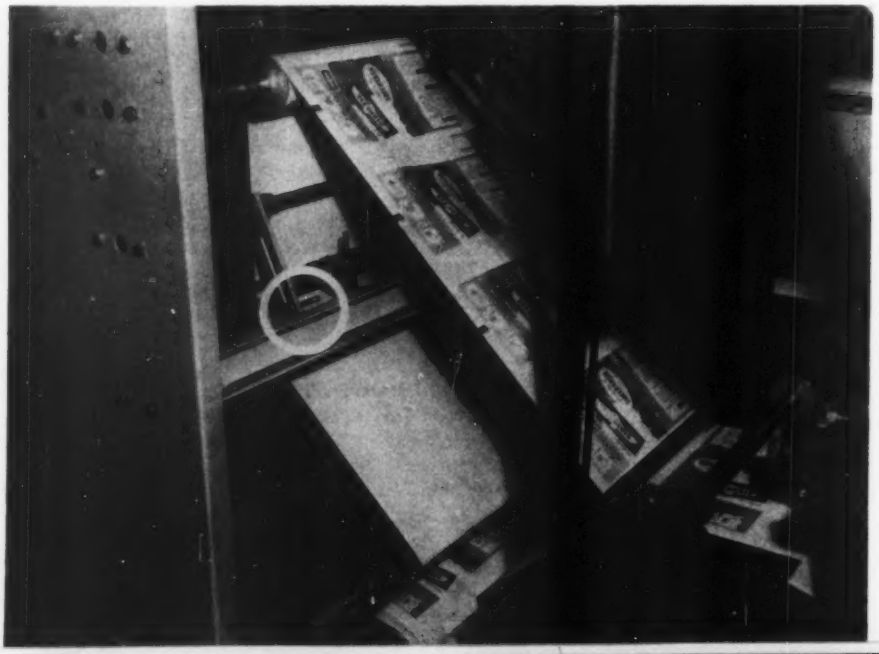
Machine action

In both construction and operation, Birds Eye's splicer is simple, rugged and compact. Outside dimensions are 32¼ by 43 in. and the machine stands 64 in. high. The two paper rolls are held in a double, pivoted yoke. Normally, the inside roll feeds the wrapper, the web passing around a slackener roll and through two pressure rolls that absorb acceleration shock and maintain constant tension on the web.

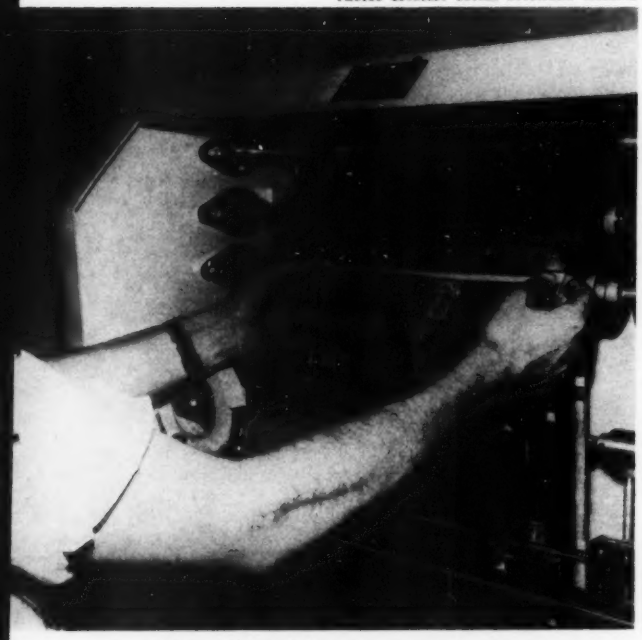
To set up the outside roll for the automatic splice, the operator clamps the leading edge of the waxed-paper strip on a special preparation table, located in the upper part of the machine. By means of a built-in knife, he trims the web at a predetermined point so the final splice will be in perfect register and will travel through the wrapper without coming into contact with the paper knife on this packager.

Next, the operator pulls and cuts a length of pressure-sensitive tape from a dispenser mounted on the machine and attaches it to the leading edge of the web. Unclamping the paper, he secures the ready web to pins on a rubber-covered splicing arm, which

In action, paper web travels through automatic splicer from inside roll (bottom), across slotted back-up plate (center), through pressure rolls (top) to overwrapper. Single drive-chain for timing cam and splicer arm is at right. Sensing finger (circled), shown here in front of back-up plate, normally rides on surface of moving web.



PHOTOS COURTESY BUTLER AUTOMATIC MACHINE



Automatic splice is set up by trimming web on reserve roll for perfect registration, attaching a strip of pressure-sensitive tape, then fastening web to pins on a splicer arm, as can be seen in this photo. Preparation table with paper clamps and built-in trimming knife is in lower foreground.

is poised above the running web. This completes preparations and the machine makes its splice without further attention.

As the running web unwinds from the roll, a sensing finger rides on its surface and is held in place by a slotted back-up plate behind the paper. When the last overwrap panel clears this finger, it rotates under spring tension into the slot in the plate, turning a cam lock and releasing the splicing mechanism. The splicing arm and its shaft are the only driven parts on the machine, being connected to the wrapper in a 1:1 ratio by a chain and sprocket. This shaft is actuated from the sensing finger by a vertical connecting rod and a train of cams.

As the splicer arm rotates downward, it forces the flexible rubber pad against the running web at the lower pressure roll (an aluminum cylinder). The new web slips off the pins and is attached to the depleted strip at the proper registration point by the adhesive tape. The pressure rolls complete the bond by squeezing the two paper strips together.

Only one overwrap contains the tape and it is removed at the end of the wrapping machine by the operator.

Turning of the outside roll on the splicer is the signal to the machine operator to reload the unit. This is done by first rotating the double yoke through a hand wheel on the side of the machine. The running web is now on the inside and the splicing mechanism is reset by pulling the sensing finger forward and replacing it on the running web.

A safety catch permits the operator to lock out the splicing action during a change-over to prevent accidents. After a new reel is loaded and the web is cut and taped, the machine is ready for action again.

Economics

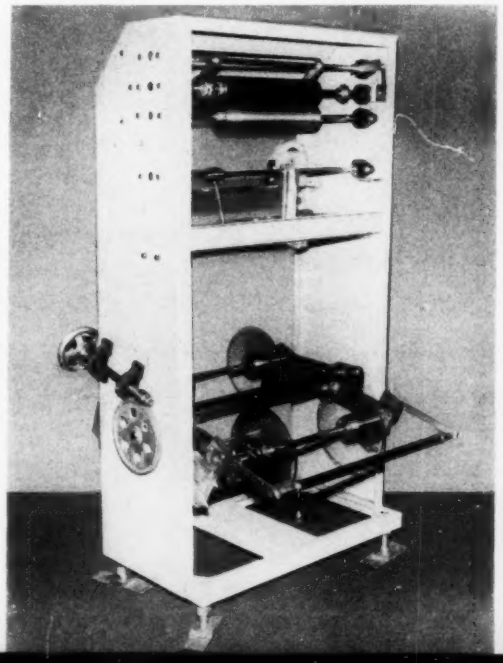
The economics of the machine will vary with the installation and particularly with accounting practices. These factors at General Foods give a very conservative picture of the splicer's performance.

At the Wayland plant, where the unit was operated during the past season on the frozen pea and green-bean packs, and at the Hillsboro, Ore., operation of this General Foods division, where another unit has been installed, packaging is not stopped on the 195-per-minute lines during roll changes.

Thus, Birds Eye does not figure any savings of lost production time through use of the splicer and the only tangible benefits here are those derived from the elimination of one service man and the saving of wrappers normally wasted during hand splicing. Company engineers admit, however, that there are also a number of intangible benefits—such as the [*Continued on page 223*]

Supplies and services: *Automatic splicer by Butler Automatic Machine, Inc., Monson, Mass.*

Unloaded view of splicer shows double yoke for roll stock. When inner roll is exhausted and outer roll starts to run, operator turns hand wheel and revolves the yoke 180 deg. for reloading.



For presentation, Gillette's de luxe heavy-wall polystyrene plastic box opens up to reveal the razor and blade dispenser on a blue flocked platform. The vinyl plastic display riser behind the platform actually is part of a removable travel kit.

Double the re-use

Gillette's 'jewel-case' box for new adjustable razor becomes a jewel case in fact, while the flapped platform lifts out to become a shaver's 'soft' folding travel kit

The Gillette Safety Razor Co. was a pioneer in the application of thin-wall polystyrene to produce a low-priced, disposable see-through case for razor and blades.* Now this company makes news again as it moves into the luxury market with a $10 adjustable safety razor and 20-blade dispenser packaged in a de luxe heavy-wall polystyrene box.

The package is of wide interest for several reasons. First, in the interest of producing a package with an unmistakable look of gift elegance, the company has deliberately eliminated one of polystyrene's prime merchandising features—its transparency. The inner walls of the metal-hinged box are sprayed a metallic blue, making the product inside invisible until the box is opened and giving the package's exterior an interesting prismatic effect. The sole product information on the box is the name, "Gillette," against a crested trade symbol, gold vacuum plated and molded into the under side of the lid before it is color sprayed.

The second unusual feature of this new package

*See "Gillette Razors and Blades," *Packaging's Hall of Fame*, MODERN PACKAGING, May, 1951, p. 92.

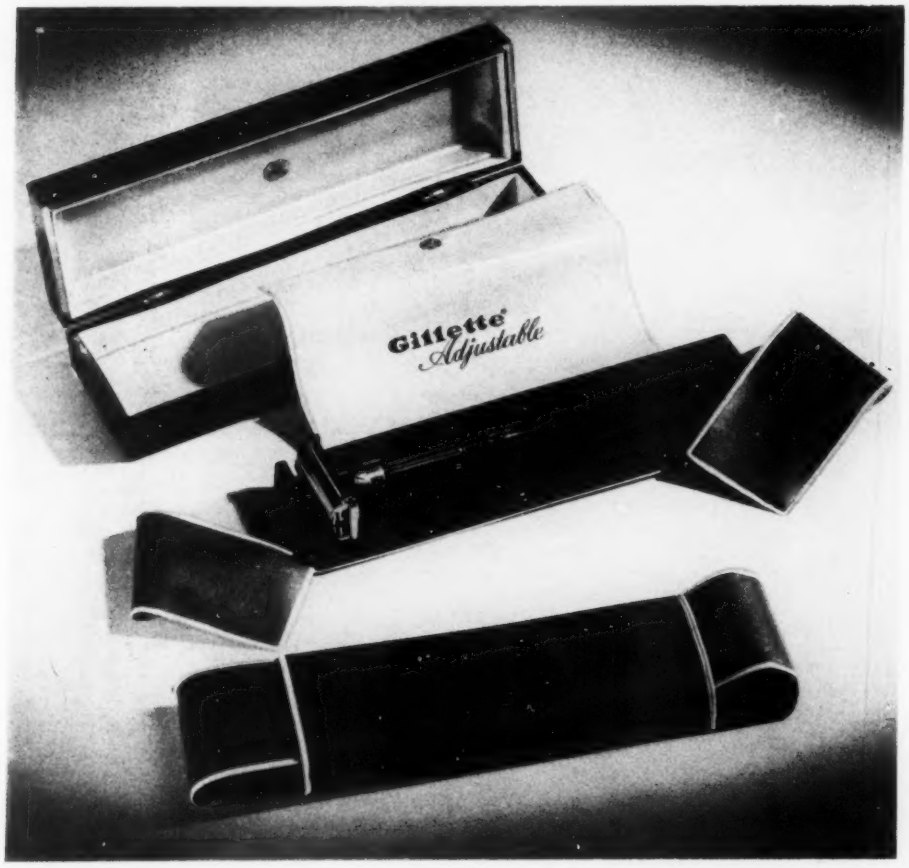
is its blue flocked polystyrene platform, constructed as an integral part of a pull-out travel kit. The one-piece molded platform is secured to a vinyl overwrap by six studs that project through the base of the double-thickness vinyl and are heat flattened to secure a tight bond.

This wrap has three flaps that form the closure for the travel case. When the platform is positioned in the box, its two longitudinal flaps are folded back out of sight, under the platform. The broad transverse flap is doubled back and secured to a rayon-satin lining in the box lid by means of a snap button. When this unit is removed for use as a travel case, the two end flaps are folded over the platform and the transverse flap is wrapped around and secured to another snap-button lock at the bottom of the platform. A descriptive booklet enclosed in the box calls attention to the removable travel-case feature, since it is not immediately apparent to the shopper.

Gillette also has figured on re-use possibilities of the box itself—as a container for studs, collar buttons and such. To promote this purpose, the side walls are lined with bengaline and there is a vinyl liner at the bottom of the case. Thus the company has incorporated double re-use in one box. When the travel kit is removed, the empty container becomes a de luxe jewel case.

Supplies and services: *Polystyrene box and platform, flocking, decoration and assembly by Erie Resistor Corp., Plastics Div., 1345 W. 12 St., Erie, Pa., using Monsanto's polystyrene. Vinyl wrap and base by Forbes Products Corp., 625 S. Goldman St., Rochester 20, N. Y., using Monsanto's vinyl. Bengaline liner and rayon-satin liner by Electric City Box Co., 795 Woodlawn Ave., Buffalo, N. Y. Metal hinges by Geissel Mfg. Co., 111 Long Ave., Hillside, N. J.*

For re-use, the entire inner unit—the platform and the vinyl wrapper to which it is secured—pulls out to form a compact travel kit, while the box itself becomes an attractive jewel case. End flaps of the wrap fold back under platform when it is in the box.



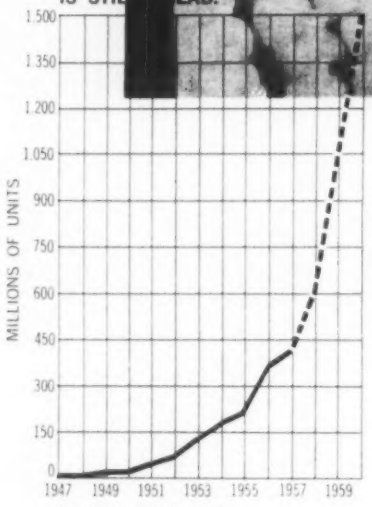
SURVEY OF A SUPPLYING INDUSTRY

SQUEEZE

PHOTO COURTESY DU PONT

Extrusion blow molding of polyethylene that launched this spectacular container industry from zero in 1947 is illustrated by a simple pilot-plant rig used for development research. Extruded parison is blown in a mold similar to glass. Commercial set-ups have more elaborate take-off devices, but the basic principles are the same.

THE B[illegible]EEZE
IS STIL[illegible]EAD.



Estimated past and future production of all types of squeeze containers

CONTAINERS

The packaging idea that started with a 'pouf!' has grown in 10 years into an industry with a 400-million-unit volume— but the biggest forward step of all may be just around the corner

The best measure of the progress of the squeeze-container industry is the fact that the name may shortly become a misnomer.

The familiar polyethylene "squeeze bottle" is on the threshhold of developments that promise to make it not merely a premium-price package, valued for its squeeze-spray function, but actually the most economical package for a given job, without regard to any function other than that of holding and conveying the product.

The polyethylene "squeeze tube" already has become a respected first cousin to the metal collapsible tube. The metal-end "squeeze can" now competes with other cans pretty much on its merits as a container, with squeeze function a secondary consideration—if, indeed, it is a consideration at all.

If, as the industry expects, the molded polyethylene container becomes a full-fledged competitor on a straight cost basis with our oldest and biggest package types, its production figures in the next 10 years will dwarf those of the first 10.

In 1947 the American public saw the first of the lightweight, resilient, unbreakable polyethylene containers that looked like opal-glass bottles, but could be squeezed like a rubber ball, dropped on the floor or thrown across the room without sustaining a dent.

The use of squeeze containers in the consumer market had climbed to 50,000,000 units by 1951, more than doubled by 1953, doubled again by 1955 and will reach the impressive total of more than 400,000,000 this year. A rough guess puts annual industry sales this year at about $18,000,000. Price of the average consumer bottle or tube is variously estimated at 4 to 7 cents. In comparison with the astronomical units of production reported for cans (40 billion), glass (20 billion) and folding boxes (115 billion), the squeeze-container figure may not look impressive. But leaders of the industry have definite ideas about jumping into the multi-billion class themselves. Even on the most conservative basis, without allowing for a real breakthrough to competitive price levels, they foresee 600,000,000 units for 1958, a billion in 1959 and 1½ billion by 1960.

There are solid reasons for this optimism:

- Basic price trends in raw materials, which find

PHOTO COURTESY PLAX CORP.

Self-dispensing function of the squeeze opened the way for broad acceptance in the toiletries and cosmetics field, which is growing constantly with lined containers that lick the problem of the permeability of polyethylene.

COLOR PLATES COURTESY DU PONT MAGAZINE. COPYRIGHT 1957

Colorful products of the squeeze-container industry are shown by Henry Griffith, widely known as "Mr. Squeeze Bottle," who pioneered in marketing first blow-molded bottles and is now behind a second major development—low-cost production and decorating of squeeze tubes, bottles and cans made by extrusion-fabrication process.

plastics (and particularly polyethylene[1]) moving downward while glass, metal and paper go up.

▶ New types of polyethylene resins, now just getting into volume production, which offer a vast new range of properties.

▶ New molding methods which, in conjunction with the newer materials, will permit molding of very thin-walled containers where economical product containment rather than squeeze function is the objective.

▶ New linings (nylon, saran, epoxies, polypropylene, etc.) and improved methods of applying them, which promise finally to lick the permeability problem that has barred polyethylene bottles from so many products.

▶ Savings in handling and freight costs due to polyethylene's light weight and non-breakability, which will assume real importance when the package is considered on a straight competitive price basis. (A thin-wall polyethylene bottle weighs as little as $\frac{1}{15}$th as much as a comparable glass container and breakage, of course, is virtually non-existent.)

THE PACKAGE

Whether the polyethylene squeeze container is a bottle, a tube or a can, the resilient characteristics of flexible plastic permit a squeeze to release contents as a puff of powder, a mist-like spray, a pinpoint stream, a round or flat ribbon, a single drop at a time or entire contents at once. This has been the basis of growth to date.

Sizes may vary from $\frac{1}{8}$-oz. capacity for eye drops to huge polyethylene drums for industrial chemicals holding up to 55 gallons. Uses range from deodorants to mustard, from shampoos to battery acids (reportedly one of the most promising areas for immediate growth). More than 2,000 different product uses have been listed for polyethylene squeeze containers.

Oddly enough, the first blow-molded polyethylene bottles used commercially did not make use of the squeeze feature. They were selected to replace wax containers for hydrofluoric acid because they were unaffected by this acid, which eats through glass, and were unbreakable.

The very first commercial application of the squeeze principle on record was for a puffer container of talcum powder[2] introduced by Alexandra de Markoff in 1947 as "Talc of the Town," adver-

[1]See "What About Polyethylene?" p. 98, this issue.
[2]See MODERN PACKAGING, Aug., 1947, p. 87.

tised by Lord & Taylor with a caption: "Pinch the plastic bottle and you're under a blizzard of bath powder."

But to Jules Montenier, with his squeeze bottle for liquid Stopette Spray Deodorant, goes the credit for really launching the industry by demonstrating to the consuming public the dramatic self-dispensing function without the aid of awkward supplementary attachments. Working closely with the original squeeze-bottle molder, Dr. Montenier, an engineer as well as a cosmetic chemist, helped to solve design and molding problems, as well as his own formulation problems, and paved the way for the long list of toiletries and cosmetics, medicinal and health supplies, chemical, household and industrial products that have since appeared on the American scene in squeezable packages.

With a new and unknown product, Dr. Montenier's package made such a devastating hit that within three years practically every other brand of deodorant was forced into squeeze bottles. This is one of the classic stories of American packaging.[3]

Other plastics molders gradually moved into the squeeze-bottle business, as patent questions were cleared away, and in 1954 the industry got a big boost when a process for the economical manufacture of squeeze bottles and tubes by an extrusion-fabrication method was brought over here from Europe.[4] This was responsible for the acceptance and growth of the squeeze tube and it led to the metal-end squeeze can. In volume today the process is a close second to blow molding. It had helped to create a new viewpoint toward polyethylene containers—as a low-cost, work-a-day package rather than a glamour vehicle.

PHOTO COURTESY BRADLEY CONTAINER CORP.

Unbreakable squeeze tubes can be warehoused in polyethylene film bags which keep them clean prior to shipment in corrugated boxes, facilitate identifying orders of various customers.

THE INDUSTRY

The squeeze-bottle industry traces its origin to a plastics experimental subsidiary of a large Hartford manufacturer of automatic glass-blowing equipment. The subsidiary set out, back in 1935, to develop a technique for blowing plastics like glass and its first efforts were directed toward Christmas-tree ornaments and toilet floats. From these beginnings it was an easy step to simple bottles. The first bottles—using other plastics as well as polyethylene—were used by the Army Medical Corps during the war because of their non-breakability.

Today there are at least 13 companies supplying squeeze containers, with facilities spread throughout the East, the Midwest and the Far West. Of these, about seven are major factors. The pioneer blow molder operates three plants in this country, one in Canada and has overseas facilities. Practically all producers are expanding, or planning to expand, to meet the big step-up in consumption which now appears in the offing.

Technical demands of the industry have required heavy financial investment for research, both by squeeze-container manufacturers and by the producers of the plastics materials used in their manufacture. Their success is an outstanding example of the kind of sound research that keeps American packaging forging ahead. In this case, a whole container industry has been created where none existed 10 years before. The leading producer of blow-molded bottles today has 40% more people in its research department than in sales and it is the

Light weight of plastic bottles is very attractive to packagers in view of rising transportation costs. Depending on capacity, containers are from four to 15 times lighter than glass.

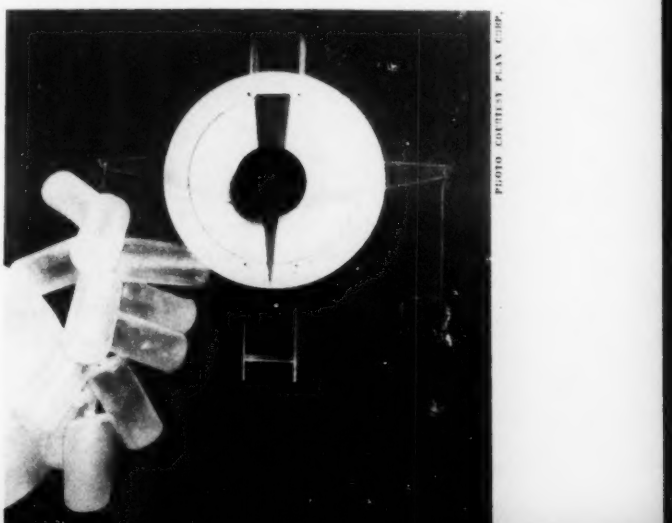


PHOTO COURTESY PLAX CORP.

[3]See "Stopette Spray Deodorant," *Packaging's Hall of Fame*, MODERN PACKAGING, April, 1953, p. 136.
[4]See "A New Kind of Squeeze," MODERN PACKAGING, Oct., 1954, p. 98.

PHOTO COURTESY PLAX CORP.

Pleasing shapes and efficient labeling are result of years of development to improve molding techniques, printing methods, label application.

payoff of this research that now promises to carry the industry a giant step forward.

All figures on squeeze-container production and use are only informed industry guesses, as the field up to now has not had its own trade association, although one reportedly is to be formed within the coming year. Importance of this field of plastics is indicated by the organization of a polyethylene bottle and tube group within The Society of the Plastics Industry.

DEVELOPMENTS

The greatest challenge has always been, and still is, the development of coatings and interior linings, or the use of new material formulations, to overcome the permeability shortcomings of polyethylene.

Linings that give new hope to the two out of three products previously barred from squeeze containers because of excessive permeation of polyethylene will be in the limelight for a long time to come.[5]

Linings in polyethylene bottles are now a commercial reality. They promise to overcome the permeation effects of excessive weight loss, odor or flavor change, bottle distortion and greasiness. The entry of the polyethylene bottle into the toothpaste field for Ipana Plus is due to a lining that protects against both flavor and moisture loss.[6]

A number of linings formulated from various polymeric materials may now be applied to the inner surfaces of polyethylene containers to produce the necessary barrier actions.

New types of linings are reportedly effective for the following types of products, none of which could be successfully packaged previously in unlined polyethylene bottles:

- Cleansing lotions and hair creams (water-in-oil-base emulsions, for which container collapse and greasiness must be eliminated).
- Baby oil, hair oils and certain pharmaceuticals which are mineral-oil-base liquids.
- Shampoos, after-shave lotions, colognes, nasal sprays, cosmetic and pharmaceutical lotions, astringents and antiperspirants subject to excessive fragrance and flavor loss.
- Cigarette lighter fluids, shoe oils, paints and fingernail polishes, for which permeability rates of regular polyethylene are unsuitable to protect volatile ingredients.

External coatings, too, are being developed to give extra protection as well as improved appearance by imparting new sheen and gloss to the containers. Researchers also are at work on coatings to help eliminate the static in polyethylene which tends to attract dust.

Development also has been concerned with improved techniques of molding to produce pleasing shapes that function efficiently, thinner-walled containers that reduce material costs, the design of fitments to provide efficiently controlled dispensing for products as diverse as shampoos and glue, and the perfecting of methods of direct printing on polyethylene—originally a major problem.

Today, improved surfacing of squeeze containers permits printing by practically all methods. And these techniques reportedly are so efficient that full-color photographic illustrations can now be reproduced successfully directly on polyethylene.

WHAT'S AHEAD

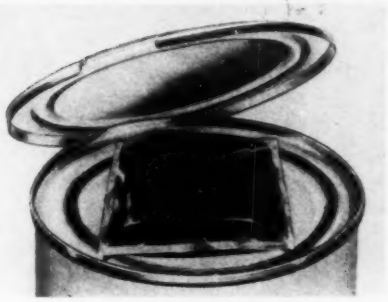
For the future, the squeeze-container industry is setting its sights on the really big-volume uses—and its heavy investment in research is primarily being directed to that end.

In the laboratories may be seen thin-walled containers specifically designed to take the place of cans and glass for household products, using the new high-density polyethylene formulations which are nearly rigid and not designed for the squeeze principle at all. To keep costs down, methods are being developed for paper labeling on standard equipment.

And the search goes on for further improved linings that will enlarge [*Continued on page 222*]

[5]See "Lined Polyethylene Bottles," by James H. Parliman and Jules Pinsky, MODERN PACKAGING, July, 1957, p. 147.
[6]See "Squeeze-Bottle Toothpaste," MODERN PACKAGING, Oct., 1957, p. 111.

Spice-it-yourself feature is expected to boost sales appeal for Broadcast Chili. Packet of seasoning simply rides on top of regular can, is held in place by snap-off second lid of lithographed tinplate.



Snap-off lid is removed by inserting the blunt end of a spoon into the slot shown and prying upward. The top pops off intact so that the can may be opened by any standard type of can opener.

Twin-lid can

Some like it hot and some like it mild,
so Broadcast Chili carries
a snap-off second lid which conceals a
packet of spices with which
consumers can season the product to taste

Who says there's nothing new in a can? An ingenious double-top metal can, recently adopted by Illinois Meat Co. as a means of making a single mild formula of its Broadcast Chili meet the varying demands of regional tastes, offers an intriguing suggestion to other producers of canned goods who might wish to integrate auxiliary ingredients, recipes, coupons or even small premiums in a tamper-proof manner within the package itself.

Illinois Meat simply fits its regular 16-oz. can with a snap-off second metal lid, under which is concealed a polyethylene-coated-cellophane packet of dry spices. Those who like their chili hot or hotter can mix in all or part of the spices to taste; those who prefer a mild chili can discard the seasoning and eat the product as is. Copy lithographed on the "flip lid" directs the user to pry open the tinplate lid by inserting a spoon handle under a 1-in. edge. This gives access to the packet of spices, leaving the can intact for opening with a can opener.

Illinois Meat reports the extra cost of this patented secondary lid is more than compensated for because only one production line is needed to turn out a product that must appeal to a variety of taste preferences. In addition, the customer intrigue and convenience in getting a separate packet of spices at no extra cost is expected to boost sales.

The extra lid is received flat and simply rolled on by another can-closing machine at the end of the packaging line. The spice packets are hand fed on to the cans before the extra lid is applied.

Special copy on the familiar red-yellow-and-black paper label calls attention to the spice packet.

Supplies and services: *Can and lithographed snap-on lid by Continental Can Co., Inc., 100 E. 42 St., New York 17. Spice packets custom packed by Packaging Services Corp., 7602 S. Greenwood Ave., Chicago 19, using polyethylene-coated cellophane supplied by Shellmar-Betner Div. of Continental Can Co., Mt. Vernon, Ohio. Labels by Wheeler-Van Label Co., 13-21 McConnell St., S.W., Grand Rapids 1, Mich.*

Slide-track inspection

Because women shoppers like to test the stiffness of bristles before they buy hair brushes, Tek-Hughes Div. of Johnson & Johnson has adopted the convenient slide-closure principle on thermoformed blister packages for its new line of hair brushes. In the thermoforming process, the edges of the blister pack are turned in to produce slide tracks on either side. A paperboard backer slid into the tracks forms a neat, snug closure that can be retracted for customers to feel the bristles, then slid back into closed position, without damaging the product in any way. No adhesive or other seal is required. This feature also keeps the brush free of dust while on display. The transparent butyrate blister itself is pattern-embossed to add extra sales appeal to the hang package. Product copy is confined to the paperboard backer.

Supplies and services: *Blister package by Plaxall, Inc., 5-26 46 Ave., Long Island City 1, N.Y., using butyrate sheet supplied by Campco Div., Chicago Molded Products Corp., 2717 N. Normandy Ave., Chicago 35. Paperboard backer by Acme Folding Box Co., Inc., 149 E. 25 St., New York 10.*

DESIGN HISTORIES

Library for baby

I. B. Kleinert's "library of storybooks" packaging for its Fancy Pants line of babies' wear suggests one way in which manufacturers can enhance the gift appeal of everyday items. The company's new package is a one-piece folding-hinge carton that looks just like a children's storybook. When opened, as at the bottom of the accompanying picture, the carton displays the product inside. An oval transparent window set into the end or "binding" panel of the closed book package displays the color of the product on self-service merchandising units. This panel also contains the company name and product information in a manner that carries out the book motif. The folding boxes themselves are color keyed in pastel shades for easier identification. Reproductions of color photos of babies modeling the pants are supported by appropriate storybook captions to upgrade the product's gift appeal.

Supplies and services: *Design by Alan Berni & Associates, Inc., 500 Fifth Ave., New York. Metal display merchandiser by Wireline Display Co., 15-32 129 St., College Point, N.Y. Carton by Trenton Folding Box Co., 106 Ewing St., Trenton 5, N.J.*

Now it's cigars, too, in flip-top boxes

Cigarette companies have changed the packaging pattern of their entire industry with the crushproof flip-top paperboard box. And now DWG Cigar Corp. has adopted a hard box for its R.G. Dun Cigarillos, packaged in units of 10. Incidentally, this new package is designed to increase unit sales as well as over-all sales, since the company formerly sold its product in cellophane-wrapped five-packs. The cigars are hand filled in what the company calls a "tip-top" box, which is somewhat larger ($4\frac{1}{2}$ by $2\frac{1}{2}$ by 1 in.) than the flip-top pack for king-size cigarettes. The laminated foil carton is printed in blue and is overwrapped with cellophane. A red cellophane tear tape facilitates opening. Individual boxes are packed 10 to a carton, which also has a cellophane overwrap.

As shown, the cigar carton converts into a convenient point-of-purchase counter display.

Supplies and services: *Boxes and display cartons by Continental Can Co., Inc., Gair Boxboard & Folding Carton Div., 530 Fifth Ave., New York 36.*

DESIGN HISTORIES

Convenient, protective institutional packaging

There's a definite trend among institutional-food suppliers to provide packages that are more functional, protective, informative and attractive (See MODERN PACKAGING, Nov., 1957, p. 131). A case in point is Carnation Co.'s new 5-lb. institutional bag of instant nonfat dry milk. The 5-lb. unit was decided on as the optimum size for institutional portion control. The new bag is made of kraft paper with a polyethylene-coated-foil lamination inner liner which, the company says, combines package strength with the necessary water-vapor-barrier characteristics. Back seam and double-fold bottom of the bag are heat sealed for extra protection.

After filling, top closures are heat sealed and the bags are packed 10 to a shipping carton. Under its new operation, packaging savings of as much as 42% per 100 lbs. of dried milk have been realized over its former bulk-packaging method, the company reports.

Supplies and services: *Bag by Crown Zellerbach Corp., Western-Waxide Div., 2101 Williams St., San Leandro, Calif. Cartons by Weyerhaeuser Timber Co., Kieckhefer-Eddy Div., Springfield, Ore., and Ebert Container Corp., Milwaukee, Wis.*

Demi-size inks

New 1-oz., 10-cent jar, in contrast to traditional 2-oz., 15-cent size, has several consumer advantages. Smaller bottle permits contents to be used up faster, thereby saving waste from evaporation. Because of the low height of bottle, fountain pens may be filled without wetting finger-grip area. Square shape facilitates extraction of the last drop of ink out of the corners of the bottle.

As desk accessory, new bottle has pleasing design, sturdy base to prevent tipping, horizontal flutes to provide good hand grip. Color printed on screw cap identifies ink color.

In this era of the giant, family-size package, an ink manufacturer might be expected to turn to quart bottles with re-use possibilities as an effective means of selling more writing fluid.

Not so the Carter's Ink Co. of Cambridge, Mass.

To sell greater quantities, it's cut the size of its bottles in half. At first, this reasoning might appear specious, but it apparently is based on cold logic.

Traditionally, ink containers hold two fluid ounces and sell for about 15 cents. The Carter people are marketing a new "Demi-Jar" that holds but one ounce and is designed to retail for 10 cents. The smaller bottle is aimed to offer dealers—and Carter's—more rapid turnover with a high profit per sale.

In addition, advertising and point-of-purchase material suggests sales of two or more bottles at one time, by urging the use of inks in different "Jewel-Tone" colors, including red, green, turquoise and purple as well as the more standard blue, black and blue-black.

The new Demi-Jar is intended to promote impulse buying. A slightly rounded square shape with hor-

Large economy sizes may not always be the answer to faster selling;

Carter's goes to half-size package

to speed up turnover and to offer higher profit margin

izontal flutes on all four sides was designed to be a handsome desk accessory, particularly since it carries no paper label. The flutes add sparkling highlights to the bottle and provide a distinctive appearance unlike any other current ink package.

Several consumer conveniences have been built into the new container. Because of the low bottle height, fountain pens may be inserted well into the jar without wetting the pen's finger-grip area. The square base and low height keep the bottle from tipping over in use, while the flutes provide a good grip. Square bottle corners facilitate extraction of the last drop of ink and, of course, the smaller size encourages using up contents before the ink has a chance to dry up.

A 30-mm. screw closure, printed in the color of the bottle contents, carries the Carter's trademark and identifies the type of ink within the jar. The cap identification, which shows the suggested retail price, eliminates the need for a separate price label which would tend to obscure identity and clutter up the package.

The new container has advantages for the manufacturer, too. On the production line, the smaller bottle is entirely suitable for high-speed filling and capping. Its lighter weight saves approximately 1⅜ oz. per unit in glass alone, which means considerable savings in transportation costs.

Founded in 1858, Carter's Ink Co. is no stranger to new product development and promotion. The company has prospered through continued expansion and development of its products into a line that now includes many supplies required for writing, drawing, stamping, marking, copying, sticking or duplicating, including typewriter ribbons, carbon paper and adhesives.

Its 99 years of marketing experience was applied to the new Demi-Jar promotion. Something less than five months passed between the initial idea conception and the final promotion, which culminated with advertising in *Life* magazine.

First, the packaging idea was market researched through interviews with consumer groups. Ink colors and characteristics were also studied and the decision was made to adopt the current line of nine types and colors.

For the package, Carter's consulted its suppliers, selecting a final choice from a number of design suggestions drawn and presented by the package merchandising department of the glass-container manufacturer.

For point-of-purchase promotion, an arched counter display rack was developed to separate each bottle into a "tiara" effect, with the vari-colored bottles resembling jewels in a crown. The new rack, featuring merchandise and not the fixture, holds four and a half dozen bottles, worth $5.40 retail, in a counter space normally occupied by only one dozen larger containers selling for a total of about $1.80 retail. In addition to the visible assortment, the tiara rack has space below for storing reserve stock. A smaller display carton containing a dozen bottles is also available.

A coordinated marketing program combining the contributions of merchandising, sales and advertising objectives was developed.

Emphasizing rapid turnover, small display space, pre-pricing and multiple color selection to the dealer, and counting on consumer satisfaction with the no-mess, no-waste Demi-Jar, Carter's is betting that, in the long run, half as much will actually sell more than ever before.

Supplies and services: *Bottles by Armstrong Cork Co., Lancaster, Pa. Closure by Hazel-Atlas Glass Co., Div. of Continental Can Co., 15 & Jacob Sts., Wheeling, W. Va.*

Tiara rack displays nine colors and types of ink in 1-oz. jars, encourages purchase of more than one bottle at a time. Smaller color assortments of a dozen bottles are offered in display cartons.

Selling unit is a multiple pack of four cans held together in paperboard can tracks. Key element is pure design suggesting colorful rug swatches in a way to create a dramatic, memorable image with minimum copy.

'MOOD PACKAGING'

That's what they call
the high-style decorator design approach
for Johnson's Rug Cleaner
that breaks completely with tradition
in the household product field

When putting out a new product, why not start with a bang by packaging in a style that's entirely new too?

That's the reasoning behind the colorful, tall quart can and what is called "mood packaging" design adopted by Johnson's Wax, Racine, Wis., for its new Johnson's Rug Cleaner, multiple packed in paperboard can tracks to make a selling unit of four cans.

Originated as a merchandising feature to promote the new Johnson's Wax "Convertible" all-duty floor- and rug-cleaning machine, the completed package looked so well, according to R. E. Dobson, Johnson's appliance merchandiser, that management decided to push the rug cleaner as a separate item.

If Johnson's had followed prevailing packaging trends for this type of product, the new rug cleaner would have appeared in a glass container. But Johnson's didn't want it to look like competitive rug cleaners.

The four-color lithographed metal quart can with soldered seam offered new opportunities for surface design with a high-style decorator approach, traditionally associated with luxury merchandise, but

not with the usual mass-market household product. It also provided the vacuum-tight protection needed for a granular product that would lose its effectiveness if exposed to air. Its handiness is assured by including a beer-can opener along with the four-can package.

The dealer gets a multiple sales unit and a powerful display package containing a quantity which Johnson's market experience indicates should be about right for consumer buying habits. One quart can does for a small rug, two cans clean a 9-by-12 rug, according to copy of the package. And Johnson's figures that most women like to purchase a supply for more than one application, or more than one rug.

The package design was created by an independent package-design firm in collaboration with William Harris of Johnson's own design department. It is identified by the designers as an example of what is coming to be known as "mood packaging."

Rather than impelling or propelling to buy by the use of blatant logotypes and colors, the designers say, the "mood package" invites purchase by conveying a feeling about the product inside through its design, shape, texture or color. The mood package is conceived as a desirable object in itself, hence does a double selling job. It creates a memorable image which the shopper cannot easily forget. It is aimed for effectiveness in instances where consumer taste is a marketing factor. And Johnson's Rug Cleaner is in this category.

The product, the company believes, will be used primarily by our young owners of light, modern, plain rugs, rather than by older, more conservative owners of Orientals and patterned rugs which need less-frequent cleaning and are more apt to be sent out for cleaning. The package that would appeal to the young, style-conscious housewife, the designers felt, would be one that would attract through contemporary design.

The design finally selected by Johnson's Wax was the most radical of several approaches. The key element is a circular "blotch," surrounded by irregular shapes suggesting rug swatches in bright decorator colors—Chinese red, canary yellow, turquoise, lime green, pale grape and orange. This memorable motif covers about half the circumference of the can, set against a black background. Beneath it in bold lower-case white letters against black are the words, "rug cleaner," the only copy visible on the cans when they are set in the can tracks. Brand identity is taken care of by the single word, "Johnson's," in white across the turquoise blue can track. Removed from the track, the cans reveal company name printed above the design in small caps with "Johnson's Wax" below it. An 11-color effect is achieved by skillful use of only four process colors. Complete directions for use are lithographed on the back of each can.

A series of scallops printed on the top of each can indicates where perforations are to be made with the can opener. Once open, the housewife never has to touch the cleaner with her hands. She simply sprinkles the cleaner on the rug. Left-over amounts may be saved by covering the opened can tightly with aluminum foil, directions say.

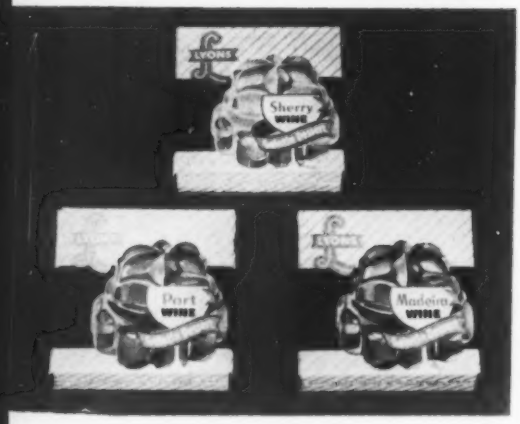
Johnson's Rug Cleaner went on sale in department, hardware and appliance stores together with the "Convertible" floor- and rug-cleaning machine in September. If the product goes as well as expected, it may appear shortly in additional mass markets.

Supplies and services: *Design program by Lippincott & Margulies, Inc., 430 Park Ave., New York 22. Cans by Continental Can Co., Inc., Metal Div., 100 E. 42 St., New York 17. Can tracks by Continental Can Co., Gair Boxboard & Folding Carton Div., 530 Fifth Ave., New York 36.*

Directions for use are lithographed on back of can. Series of scallops printed on top of each can indicate where perforations are to be made with can opener included with four-unit package.

Packaging Pageant

1



2

1 The difficult feat of illustrating gelatin dessert in third-dimension has been accomplished effectively on these new cartons for J. Lyons & Co., Inc.'s new Port, Sherry and Madeira Wine gelatin desserts. Each package has a distinctive jewel-like wine color. The "L" trademark is inspired by the British pound-sterling mark. Design, Jim Nash Associates, New York. Cartons, Lord Baltimore Press, Inc., Baltimore, Md.

2 Sales increases of 10 to 15% are reported by the California Golden State Salami Co., Oakland, Calif., since the introduction of colorful cellophane bags rotogravure printed with product vignettes for its Capri Italian Salami. The bag's metallic blue background shows up well in lighted meat cases. Bag, Milprint, Inc., Milwaukee, Wis.

3

3 Aluminum foil has been selected to give superior inner-wrap protection to crackers made by the Sawyer Biscuit Co., Chicago, a division of United Biscuit Co. of America. The 1-lb. carton for Sawyer's Saltines contains four individually foil-wrapped packs. Carton design features illustrations of the saltines in their new foil wraps. Foil, Reynolds Metals Co., Louisville, Ky. Carton, Chicago Carton Co., Chicago.

4

4 Add to the growing list of store-shelf-to-dining-table containers this new 26-oz. decanter bottle for Blue Label Tomato Juice Cocktail by Curtice Bros. Co., Rochester, N. Y. Narrow, wrap-around paper label on the shoulder is easily removed. A decorative element is the blown-in ribbed design on the re-usable bottle, which is convenient for handling and pouring. Bottle, Owens-Illinois Glass Co., Toledo, Ohio. Lithographed metal closure, White Cap Co., Chicago. Label, Stecher-Traung Lithograph Corp., Rochester, N. Y.

5

5 From England comes this circular half-pound "bonnet box" of chocolates by Barker & Dobson, Ltd., Liverpool. Printed in blue and white Regency stripes, it is topped by a fluffy blue bobble in the center of the slip-over lid, secured by a blue cord which passes through the box and is tied in a bow on top. The bobble is in a protective sleeve of cellulose acetate and a cellophane overwrap protects the entire unit. Cellophane, British Cellophane, Ltd., London, England.

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6 The Bon Ami Co. is promoting its Glass Gloss glass and silver cleaner in a Christmas Stencil Decoration Kit. The kit holds seven vinyl stencils and color decorations for windows, plastic sponge applicator, color tablets and instruction folder. Packed in a folding carton, die cut at one end to reveal the Glass Gloss in its new round metal can, the kits are delivered in Christmas-decorated shipper-displays. Carton, Container Corp. of America, Chicago. Can, Continental Can Co., New York.

7 Bold, horizontal stripes in cocoa and brown create a striking new label design for Beech-Nut Life Savers, Inc.'s peanut butter jars. Product name is in bright yellow, while red and white are used for sales message and trademark. Lithographed metal cap is yellow, red and white. Jar and cap, Hazel-Atlas Glass Div., Continental Can Co., New York. Label, Stecher-Traung Lithograph Corp., Rochester, N. Y.

8 Pots and pans have been upgraded as gift items by General Steel Wares, Ltd., with a gift carton printed in flame red and turquoise green on white board. Lettering is confined to the "Coronet" name in red and white letters and "stainless steel" in white. Inner platform is red. Design, Orr Associates, Ltd., Toronto, Ontario. Carton, Bathurst Power & Paper Co., Toronto.

9 Perforations in this three-panel carrier for Goebel Brewing Co.'s canned beer enable each of the three cans in the multipack to be separated, with its section of the carrier still attached, so that the carrier serves as a sturdy coaster. The carrier is slotted on the inside so that the rims of the 8-oz. cans are firmly gripped. "Can-Trak" carrier, Continental Can Co., New York.

10 Multipack cartons are used by Martinson Coffee Co., New York, as a special introductory offer for its new Jomar Instant Expresso. The four-color offset printed carton holds two 2½-oz. jars, one of regular coffee and a free jar of Expresso, separated by a corrugated divider. "Cluster-Pak" carton, Mead-Atlanta Paper Co., Atlanta, Ga.

11 A new approach to seed-package design based on the "product-in-use" concept has been adopted by Northrup, King & Co., Minneapolis. Illustrations

of a steaming plate of corn on the cob dripping with butter and of garden-fresh peas or beans in handsome serving dishes replace the conventional designs of pods of peas, beans or corn in a husk. Cartons, Stecher-Traung Lithograph Corp., Rochester, N. Y.

11

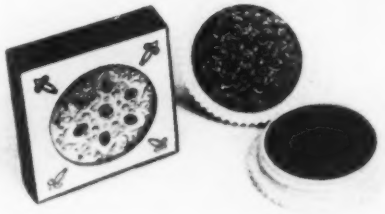
12 An inexpensive, compact, set-up paper box has been added to the sewing-kit line of Coats & Clark's, Inc., New York. The sturdy box holds thread, yarns, scissors, needles and thimble, yet is small enough to carry in pocket or purse and retails for only $1. The box has a pin hinge and slanted sides for maximum display and protection. Black waterproof cover paper has a gold-leaf design. A circular label is on the inside cover and gold-colored pyroxylin paper covers the base. Box, Dennison Mfg. Co., Marlboro, Mass.

12

13 Flexography and rotogravure processes are combined in printing this new overwrap for Wilson & Co.'s Certified Franks. Trademark panel, legend and ingredient copy are printed by flexography; illustrations and background by rotogravure. Yellow, deep orange and wine are the accented colors. Instructions on the board backing are printed in wine-colored lettering on white to match the wrap. Package, Container Corp. of America, Flexible Packaging Div., Chicago.

13

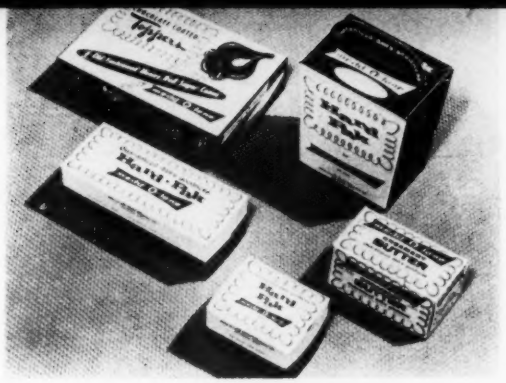
14 A rich-looking medallion imparts a metal-like appearance to this molded polystyrene case, with mother-of-pearl finish, for Helena Rubinstein's new Purscent solid perfume. The medallion's base is die-cut foil laminated to transparent acetate and embossed to achieve extra dimension. Printing inks give the illusion of semi-precious stone settings. Die-cut center of folding carton reveals medallion. Medallion, Donrico, Inc., New York. Case, Jamison Plastic Corp., North Bellmore, N. Y.



14

15 Infinite variety possible with folding-box constructions is indicated by this flower-stall package designed for one of Cannon Mills' current towel gift sets. Awning and platform are integral parts of the box. Towels are visible through transparent film behind front section, die-cut to give third-dimensional illusion of floral illustration. Folding box, Burgess & Winy Corp., Philadelphia.

15



16

16 New family package design adopted for all dairy products distributed by Medd-O-Lane Dairy Products Co., Bettendorf, Iowa, is aimed at establishing brand-name recall. It includes the entire line of standard linerless pints and quarts; half-gallon carry-home packs; Elgin-style butter carton and novelty package for chocolate-coated Toppers. Containers, Marathon Corp., Menasha, Wis.

17

17 A gift atmosphere for year-round sales had to be attained in this redesigned set-up box for d'Orsay Sales Co.'s cologne-bottle sets, yet it retains the conservative graphic treatment characteristic of all packages used by this old French perfume house. The design is confined to gold-bronze printing of a tassel motif on off-white paper, with delicate black lettering for company name. The entire design and textured background are embossed. Design, Tuba Tavor, New York. Cover paper, Richard M. Krause, Inc., New York. Set-up boxes, Wallace Paper Box Corp., Maspeth, Long Island, N.Y.

Packaging Pageant

18 A drawing of a hand covers almost the entire face of this bold black-and-white carton for Armour & Co.'s new Formula 99 Hexachlorophene Hand Soap. Each of the two types of soap carries a second color in the word "Hexachlorophene"—green on Heavy Duty and red on Borax type. Design, Robert Sidney Dickens, Inc., Chicago. Carton, Ohio Boxboard Co., Rittman, Ohio.

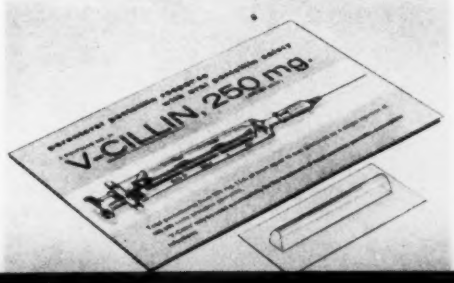
18

19 Quick product identity from any angle is provided by this new lithographed metal container for Pactra Chemical Co., Inc.'s Pactra Power Fuel, a model-engine fuel. It is intended to be effective stacked on shelves in face-out or end-out position, or on a low counter. Can, American Can Co., New York. Lithographed metal cap, Armstrong Cork Co., Lancaster, Pa.

19

20 Newest of Eli Lilly & Co.'s pharmaceutical professional samplers is this pressure-formed package with transparent cavity simulating the barrel of a hypodermic syringe. Flanges are held between two latex-coated cards. A punch-out oval at the back facilitates removal of the three pulvules of V-Cillin (Penicillin V, Lilly). Package, Paper Package Co., Indianapolis, Ind., using Celanese acetate.

20



Product protection and full visibility are integrated in Barracuda's new Super Dude "package." Display card can be hung up, or its easel back can be swung out for counter use. Stapled elastic loops hold 12 lures firmly on the card, permit easy slide-out removal at point of sale.

Foot-operated stapling machine stitches elastic loops on Super Dude display card. Foot operation speeds production by giving worker maximum visibility and operating room.

Stitching for display

Using staples to loop elastic on a counter card enables Florida Fishing Tackle to get its plastic-tubed lures out front where they'll catch fishermen as well as fish

Fishing lures are bait for the fishermen as well as for his quarry, so they must be packaged and displayed for maximum visibility. This sales-making maxim is being used to advantage by Florida Fishing Tackle Mfg. Co., Inc., St. Petersburg, which has put its Barracuda brand tackle on colorful display cards where anglers can see—and buy.

Basically, the company has done this by using various types of stapling machines to card its line for display. In the case of its top seller, it has also introduced a cellulose acetate tube for product pro-

tection. The tubes are fastened to the display card with elastic loops applied by an air-operated stapler.

Other cited advantages of the stapling procedure are speed-ups in production time, increasingly important to the company in view of the sales increases generated by display packaging.

Barracuda's best-seller—the Super Dude line of lures—is a good example of how stapling has made possible packaging innovations that reflect in greater success at the point of sale. The first Super Dude package was an individual unit 3½ in. long and ¾ in. deep—just big enough to hold one lure. About the best display this item could hope for was equal space with its competitors on dealers' shelves, or a spot on the counter (where the compact little package was a natural for pilferage).

In an attempt to win better in-store promotion, Barracuda decided to put its product on counter-display cards. Since it couldn't find a suitable method of fastening the rigid container to the card, the company simply discarded its containers and stapled the lures directly to the card.

That was an improvement, but certainly not a solution. What Barracuda really wanted was something that would combine the protection of the package with the display advantages of the counter card.

An air-operated stapler and a transparent extruded cellulose acetate container like those commonly used for toothbrushes gave Barracuda exactly the combination it was seeking. The tubular container, with cemented, perforated base, is 4 in. long and has a drawn cap also of cellulose acetate. After the finished lure is inserted in the tube along with a paper label, the closure is secured with a strip of pressure-sensitive tape. The stapler stitches elastic loops to a lithographed, easel-back display card. The loops hold a dozen Super Dude containers firmly in place and permit easy slide-out removal at the point of sale.

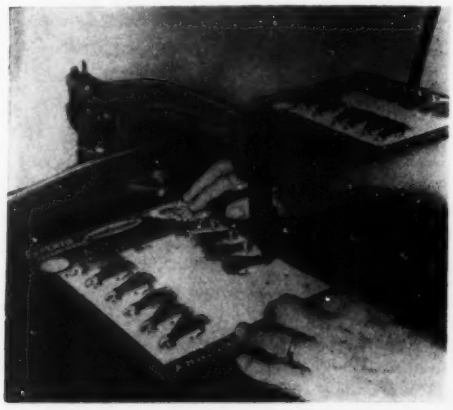
As many as 3,000 lures can be carded daily by this stapling procedure. It's faster and simpler than the old operation, and salability of the Super Dude is obviously enhanced.

Other lures and tackle in the Barracuda line are carded by using an inverted-head wire stitcher. The machine's stitching mechanism is located under the operator's table to allow [*Continued on page 221*]

Supplies and services: *Stapling machines by Bostitch, Briggs Dr., East Greenwich, R.I. Super Dude tubes by Plas-Tube Co., 26 Fahey St., Springdale, Conn., using Eastman Chemical's cellulose acetate. Easel-back display card by Hillsborough Printing Co., Tampa, Fla. Card for nylon leaders by Turner Printing Co., St. Petersburg, Fla.*

Single staple used to bind coils of Barracuda nylon leader speeded production by 25 times, reduced labor costs 75%. Previous hand tying of 10-yd. coils before packaging was time consuming.

Smaller lures, Baby Dudes, are stitched directly to display card with this foot-operated stapler. In former (and slower) operation, lures were fastened to individual cards, then bagged.



After winding leader coils on machine, one worker using a stapling plier as shown here can now turn out 500 doz. bound leader coils per day.

Owens-Illinois Assures You A Complete Packaging Approach

Co-ordinated Research

Pure research into fabrication of glass, *packaging research* into processing and handling methods in customer plants, *market research* into consumer attitudes. All add up to greater packaging value.

Engineered Design

At Owens-Illinois, your package's *three* needs are taken into account: 1) Considerations of its function in the retail store, 2) its operating efficiency, and 3) its consumer utility.

The Right Container

There's an O-I container to meet your special needs: Duraglas containers; Libbey Safedge packing tumblers or premiums; Kimble Ampuls and Vials; and a variety of plastic containers.

The Right Closure

Through long and continuing research O-I has developed the most advanced metal and plastic closures. Helping you choose the right closure is another function of O-I's packaging service.

Needed Fitments

O-I specialists are keenly aware of sales benefits derived from plastic shaker and pour-out fitments which are not "gadgets" but which increase consumer satisfaction with your product.

Merchandising Cartons

Modern cartons are developed only through systematic consideration of their opportunity to serve you in the retail store and warehouse . . . as well as on your own filling line and in transit.

Drop by drop, or poured by the spoon . . . accurate measuring is easy with Duraglas containers.

Extract Flasks are available in ½ oz., 1 oz., 2 oz., and 4 oz. capacities.

She buys her "favorite taste" in a Duraglas container

TODAY'S HOMEMAKER likes to add a personal touch to cooking through the variety of flavoring extracts available at her store.

She likes them packed in Duraglas containers for the ease of pouring and accurate measuring ... because they can be opened and closed tightly to preserve contents during a long shelf life ... plainly visible contents give her a quick check on supply ... and storage is simple because of the size and shape of the container.

There is a Duraglas container to fit your required packaging need. Owens-Illinois' complete packaging service assures you of the right Duraglas container, quality closures in plastic or metal, fitments that meet your dispensing need ... attractive, selling label designs ... and sturdy cartons imprinted with your sales message. So look to Owens-Illinois for all your glass packaging requirements.

Call or write today.

DURAGLAS CONTAINERS
AN (O) PRODUCT

OWENS-ILLINOIS
GENERAL OFFICES · TOLEDO 1, OHIO

For the Christmas rush

In the 45 days before Christmas, retailers sell a full 33⅓% of their annual cellophane-tape volume, according to a survey conducted for Minnesota Mining & Mfg. Co., St. Paul, Minn. With this statistic as the starting point, the company has made available a line of 11 floor-stand and counter-display merchandising units for its Scotch brand cellophane and gift-wrap tapes.

Shown here is one of the displays, a floor stand which contains a wide assortment of gift-wrap and transparent-tape rolls. The display has a colorful tapering base illustrated with a Christmas scene that subtly indicates some of the Yuletide uses of Scotch tape—as decorative seals and design elements on gift packages and to hang greeting cards on the tree or around a mirror, for example. Bold copy and illustrations on the display riser also point up these seasonal applications of the product. Rolls of tape are displayed in an open tray that projects from the base at hand height as an extra stimulus to impulse buying.

Supplies and services: *Display by Waldorf Paper Products Co., 2250 Wabash Ave., St. Paul 4, Minn. Design by Reynolds Guyer Agency of Industrial Design, Griggs-Midway Bldg., St. Paul.*

Display Gallery

Beauty-salon bar

To spotlight the debut of its products as sales items in beauty salons, Lentheric, Inc., New York, has adopted a counter display of five of its Tweed line of cosmetics on a brass tray. The display has a black, flocked cardboard base that is die cut in conforming shapes to hold the packages securely in place. Brass handles on the decorative display tray's rails are designed to give it the appearance of a boudoir accessory.

The brass tray also is fitted to receive a replaceable cardboard riser on which copy and photographs illustrate the glamorous properties of the line. The display shown contains Tweed perfume, toilet water, hair spray, bath powder and cologne. It can be changed to include other products. A window decal identifying the salon as a franchised outlet for Lentheric products also is supplied by the company.

Purpose of moving into beauty salons with its line, the company reports, is to expose women to toiletries at a time when they are most interested in beauty care. The luxury look of the counter display also is designed to suggest to the beauty-shop customer that these cosmetic products can be bought individually or in sets for giving as gifts.

No-roll open display for bouncing rubber balls

Die-cut corrugated-board display units solve the problem of displaying toy balls for Barr Rubber Products Co., Sandusky, Ohio. Pictured here are two of these units, designed to produce effective open display while reducing the possibility that the balls will roll off the counter or shelf while they are being inspected by shoppers. The units also are expected to increase impulse purchases of the products as Christmas gifts and for year-round gift occasions.

The 18-in.-high display at the left is assembled by the retailer into a conical merchandising stand that consists of three circular shelves and two upright center sections that form the base. Each shelf is die cut to hold four individually transparent-wrapped balls, with the top of the stand shaped to hold an additional ball. At the right is a die-cut corrugated display box in which the company packages its three-piece basketball set—ball, hoop and net. The box design—a laurel victory wreath around the die-cut opening and a black background—is intended by the company to suggest the high quality of its product.

Supplies and services: *Displays by Hinde & Dauch, 407 Decatur St., Sandusky, Ohio.*

Display Gallery

Greater visibility for night-light bulbs

Enhanced brand identity in self-selection retail stores is the primary design objective of two new display units produced for seven-watt night-light bulbs by General Electric's Large Lamp Department, Nela Park, Cleveland, Ohio.

Shipping cartons for the carded bulbs are constructed to convert quickly and easily into counter displays. The carton closure folds back and is secured by inserting its tongue flap behind the last card in the shipper. The riser thus formed contains product copy and illustrations of night-light uses.

Each shipper-display carton contains six die-cut cards holding two bulbs each. Copy on the cards repeats the "low-cost, long-life" message on the carton.

The perforated cards of night-light bulbs are designed to be sold as a single unit, or they can be torn along the perforation and each half sold separately. Both the display carton and the carded packages are lithographed in yellow, blue and white to provide greater visibility on self-selection store shelves and to identify the product as General Electric's.

Supplies and services: *Carton by Federal Paper Board Co., Inc., National Folding Box Co. Div., 24 River Rd., Bogota, N.J. Card by Holyoke Die-Cut Card Co., Holyoke, Mass.*

37 packages from 3

Using multigraph for two-color imprinting at packaging plant gives Sears a full pre-packaged line of nails, in ingenious dispensing cartons, using only three basic blanks

The idea of using multigraph equipment (adapted from the greeting-card industry) to produce two-color printing in the packager's plant has made feasible a highly functional new folding carton for nails at Sears, Roebuck & Co., Chicago.

On the packaging line, 37 different cartons are obtained by imprinting just three basic boxes. The achievement is the result of a marketing need calling for a completely new package, which in turn required a new in-plant printing technique to make the package economically sound.

Sears' in-store sales of nails are aimed at the home user, not the building contractor. Many customers are women. The folding-carton construction gives the customer the convenience of an old gravity-fed nail bin in the modern form of an individual package, making it the most convenient-to-use nail pack-

Color code and imprinting quickly identify type of nail and its use. Thirty-seven different packages made from only three basic carton sizes has enabled Sears, Roebuck & Co. to expand its nail line and streamline its merchandising operation. Above, three sizes of cartons for 1-, 2- and 5-lb. quantities hold all types and sizes of nails.

age on the market, says Sears. It is easy to close and store, and is color coded and illustrated to identify quickly the nail and its proper use for the most bumbling do-it-yourselfer as well as for the experienced home carpenter.

At the retail level Sears is saving customers as well as money.

The company has established that binned items are more costly to sell and handle than the same items pre-packaged. Expense of sales personnel to weigh and package low-profit merchandise like nails becomes definitely a money loser, particularly during busy periods, and 70% of Sears' sales are made during just 30% of the week.

The special binned counter for nails which the company previously maintained was costly and not far removed from the cracker-barrel era. Sears subsequently tested a single-size tear-string fibre can that did a good protective job, but did not have sufficient flexibility for a contemplated expanded nail line.

With all the difficulties, Sears until this year stocked only a small variety of nails. For any specialized nail needs, customers in Sears' hardware departments had to be referred to a hardware store.

Sears sought a new nail package that would be economical, would hold many types of nails, would be adaptable to packaging in the nail manufacturer's plant and would have customer convenience.

Half the answer was a folding-carton construction that comes in three sizes—to hold 1-, 2- and 5-lb. quantities.

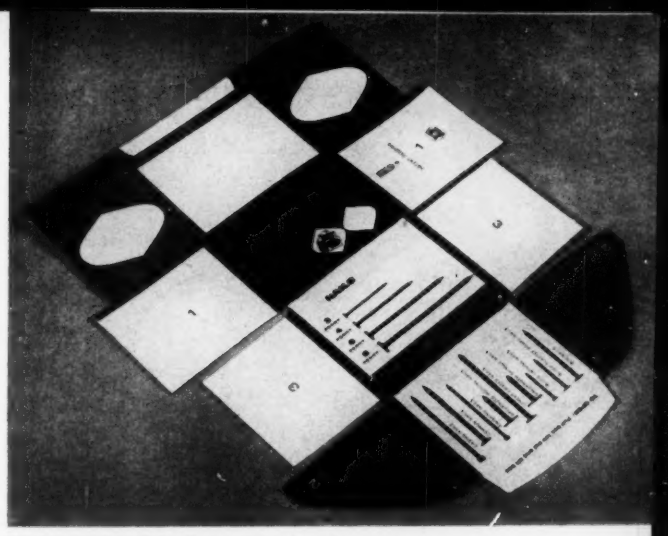
The new folding carton forms a reclosable bin when the break-away glue lap is pulled away from the front panel. Secret of the construction lies in two specially designed end flaps which are curved and act as a hinge upon which the box opens and closes. When the box is properly folded and glued, each such arc flap rides between two unglued flaps until a built-in stop on the curved piece prevents the carton from opening any further.

While the carton construction is an ingenious solution to Sears' needs (and with modifications could be adapted for many uses, including a self-contained pouring spout), it did not solve the production-line problem. How could Sears economically obtain 37 different packages from the three basic sizes and stock these cartons in the nail plant to meet changing daily requirements?

Having all 37 pre-printed was out of the question. Inventory and carton costs would be prohibitive.

The answer comes from a cooperative effort among Sears' own packaging experts, the carton company, equipment supplier and nail manufacturer —Wire Products Co., Hortonville, Wis.

Imprinting at the nail manufacturer's plant was



Basic carton blank as received in three sizes at nail plant. Basic design is printed in black and yellow, with front and two end panels left blank. Cartons are received glued at glue lap. On the packaging line at nail plant, front panel is imprinted to show type and actual size of nail enclosed, with weight of contents; end panels are imprinted with identifying and promotion copy. Four different colors are used to code nails: red for common nails, green for masonry nails, blue for special wall nails, while silver is used to identify the galvanized and aluminum nails.

an obvious approach. But the package design and a color code that would change from box to box would require rather extensive two-color printing. The nail manufacturer could not invest a great deal of money in printing equipment.

Sears called in a manufacturer that rebuilds multigraph machines for the greeting-card industry. It outlined its needs for a two-color press which could be run easily and changed quickly without using highly skilled pressmen.

Specifically modified equipment was built to solve

Easy-to-use carton becomes an individual gravity-fed nail bin when the customer pulls down front break-way glue lap. Carton is raised to form front opening for access to nails. Carton opens much wider than shown here, making it easy to get to the nails when the box is nearly empty.

In-plant printing on packaging line begins with two specially rebuilt multigraph machines coupled in tandem. Carton blanks, fed from right, pass under color-code rubber plate, then under black rubber plate. Completely printed cartons drop onto conveyor, are automatically passed under heating lamps for drying before moving to filling stations.

the problem. Two multigraph machines were placed in tandem and synchronized with a chain and gear drive. By using one of 37 sets of plates and black ink plus a particular color-code ink, a regular plant employee can now operate the special press to produce a package ready for filling.

To meet the daily packaging requirements, Wire Products Co. takes one of the three basic sizes of "information-less cartons" and merely converts it into one of the 37 specific packages on the packaging line. The two-color rubber plates are mounted on the coupled multigraphs, the packages are printed and pass under a drying hood that is equipped with eleven 150-W lamps.

The cartons arrive at the nail plant printed in black and yellow, and glued at the glue lap. Basic design and information already on the box include a nail size chart (carried over and expanded from its experimental nail package) and a chart identifying types of nails.

The front and two end panels are imprinted in two colors at Wire Products. The main panel shows the type and actual size of nail packaged, along with the weight of contents. Specific identifying and promotional copy runs on the end panels. Four colors are used to code the nails: red for common carpentry nails, green for masonry nails, blue for special wall nails, and silver for galvanized and aluminum nails.

After printing and drying, cartons move on to two filling lines. Boxes are glued on one end and placed on weigh scales under filling stations. Nails are fed into the packages with a "dump and dribble" method from vibratory chutes. The bulk of the package's weight is dropped in quickly and the remaining nails are fed more slowly until correct weight is registered. An electronic switch on the scale cuts off filling action.

The filled packages are conveyed to a receiving station where they are inspected. The remaining open end is glued and cartons are packaged into corrugated shippers ready for shipment to Sears control stores.

Initial printing register problems have been solved and the printing-packaging line operates smoothly. The carton is strong enough to hold the nails and when placed in correct-size shippers is reported not to tear or burst on the journey from nail manufacturer to customer.

The in-plant printing method could be adapted for many other products that are basically the same but come in a variety of sizes or types. Sears thinks the system can cut package inventory and costs for a number of its own products outside the hardware field.

The carton construction obviously offers possibilities for many other products that need to be "dribble dispensed" in use.

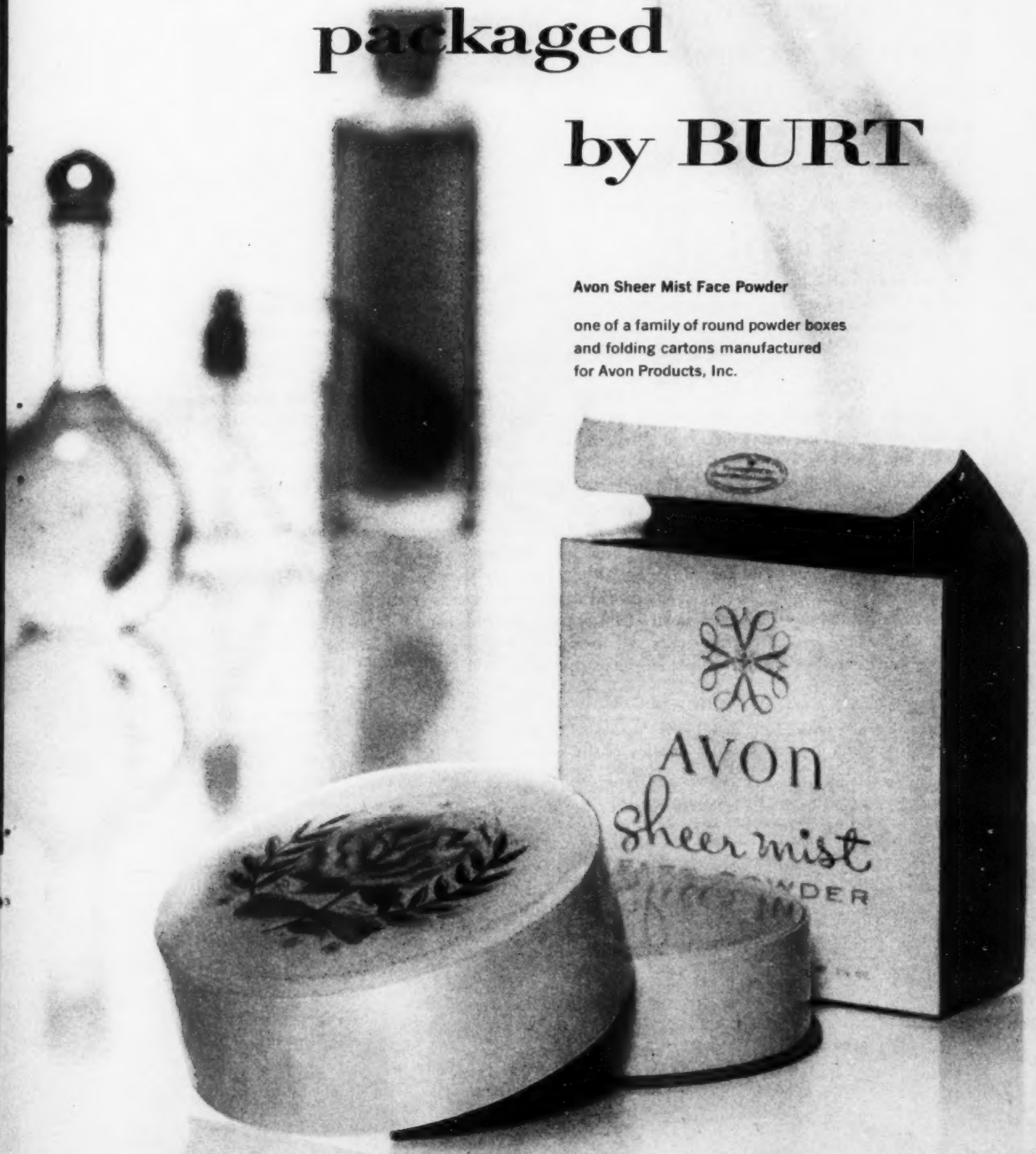
Supplies and services: *"E-Z Pour" carton designed by Costis J. Paps, 806 Van Buren St., Chicago. Carton licensed to and manufactured by National Carton Corp., 1 Park Rd., Joliet, Ill. Addressograph-Multigraph Corp. machine rebuilt by Hanley Mfg. Co., 411 S. Wells St., Chicago 7.*

Arriving at filling stations, printed boxes are folded and glued by hand. Cartons, placed on weight stations, are end filled from vibratory chutes by "dump-and-dribble" method. Filled cartons are placed on conveyors to move to sealing station, then are packed in corrugated shippers.

another prestige product packaged by BURT

Avon Sheer Mist Face Powder

one of a family of round powder boxes
and folding cartons manufactured
for Avon Products, Inc.



F. N. Burt Company, Inc. Manufacturers of Small Set-up Boxes, Folding Cartons, Transparent Containers. 500-540 Seneca St., Buffalo, N.Y.
Offices in Principal Cities or Write Direct. Canadian Div.: Dominion Paper Box Co., Ltd., 250 Islington Ave. S., Toronto 18, Canada

Symbol for quality

Pittsburgh dairy builds a whole new marketing program around a modernization of its label, featuring a "Q for quality" emblem with a bright new decor of pastel colors

Vital in any package-design program is the adoption of a central theme to create a favorable conception of the packaged product—one which can be used in all the forms of promotional advertising now necessary to back up the new package.

No theme is more pertinent to food products—particularly dairy items—than the idea of quality. Recognizing this fact, Otto Milk Co., Pittsburgh, has seized on the word "quality" and turned it not only into a distinctive trademark, but a symbol adaptable to advertising treatment in any media.

This action followed a three-year modernization of the firm's plant, which also produced significant technical improvements in its line of "Cream Thru" cottage cheese and milk. The company produces sour cream and cottage cheese in small and large curd, whipped-cream and fat-free styles, all packaged in round, nesting, liquid-tight paper containers ranging from ½-pt. to 2-lb. sizes. Homogenized, fat-free and chocolate milks, orange juice and whipping cream are packaged in cartons ½-pt. to ½-gal. size. The only thing lacking in this diverse assortment was a good, unifying package design.

A careful study was made of the situation, in cooperation with a leading supplier, and a completely new design approach was conceived for the container. Its essential elements are:

- A distinctive trademark that highlights the quality theme by means of a large "Q" surrounding the company name.
- A sunburst symbol to center consumer attention on the trademark.
- A product-identification system using cool, pastel colors, each identifying a different type of cheese.

These points combined with new typography and a reverse-printed panel facilitate shelf identity.

Topping off the presentation is a buff-coated-metal, snap-in lid brilliantly lithographed in a pastel color to match the body of the container in each case, which adds maximum eye appeal to the new package. The double-locking metal lid provides a more rigid package and boosts shelf life both in the store and in the home refrigerator because of its leakproof, impermeable construction, according to Otto. Its coolness to touch in refrigerated displays is a further factor, the company believes, heightening the impression of freshness and quality.

New designs were also created for the firm's milk cartons, combining all of the elements in the cheese cups to produce a strong, family tie-in.

Kicking off the quality theme, Otto declared a "Q Day" in Pittsburgh and launched a promotional program that included 360 weekly radio and TV spots. The firm further capitalized on this push with 24-sheet outdoor billboard posters and a series of outdoor paint boards, backed up by in-store window posters and attractive dairy-case stickers.

The coordinated program bore heavy fruit and sales of dairy products reportedly have zoomed.

Supplies and services: *Containers, lids and design layouts by Continental Can Co., Inc., Paper Container Div., 70 Park St., Montclair, N. J.*

Dominant trademark, built around a "Q" for quality in sunburst symbol, makes the new Otto packages stand out in refrigerated displays. Photo shows front and back of one new container for whipped-cream-style cottage cheese and a range of the lithographed metal lids, each of which carries a different pastel color, matching its container, to identify the product variety.

How 3 types of packaging with BAKELITE Brand Plastics provide

Beauty, impact, and protection

1 BAKELITE Brand Styrene Plastic

BEAUTY . . . It takes a beautiful package to sell a "beauty" product. And this "Date" Case compact for Pond's is a beautiful package. It contains their famous "Angel Face" Powder and Foundation-in-one. It's artfully molded from BAKELITE Brand Styrene Plastic and finely decorated with gold. The rich-looking appearance inspires the utmost confidence in the quality of its contents.

Pond's "Date" Case is typical of the packaging excellence possible with BAKELITE Styrene Plastic. This pleasant-to-touch plastic assures all the vivid beauty . . . color and style that are so necessary for competitive selling on crowded counters. Its versatility permits package designs that are only limited by the imagination. So specify a BAKELITE Brand Styrene Plastic for your product. It's the ideal rigid packaging material for scores of products such as foods, beverages, drugs, cosmetics and novelties – products that will have extra sales appeal because of better eye appeal.

Angel Face "Date" Case molded by Cowan Boyden Corp., Providence, Rhode Island

beauty, impact and protection *(continued from preceding page)*

2 KRENE® Cast Vinyl Film . . . made by BAKELITE Company

IMPACT: . . . Powerful sales impact with "packaging" that enhances product desire and wins the Gold Award in package competition. This striking package features KRENE Cast Vinyl Film and it won the Gold Award for the "Best Toy Package" of 1957 in the contest sponsored by "Variety Store Merchandiser".

When you package with KRENE Cast Vinyl Film, it's easy to see why it is a prize-winning material. Its superb clarity and gloss add an elegance to product quality that sparkles in competitive selling. Its exceptional tear strength assures maximum protection. Your product is safeguarded from dust, damage and soiling from constant handling. Tensile tests prove that KRENE can be elongated up to 300% without rupture. It may be easily fabricated into covers, bags and packages with thicknesses ranging from one to eight mils.

So specify KRENE Cast Vinyl Film . . . it's the packaging film to use when "elegance" is just as important as "protection".

3 BAKELITE Brand Polyethylene Coating

PROTECTION . . . Here's a picture of "polyethylene protection in action" . . . the type of protection that customers like to see — the extra step that assures greater customer satisfaction.

The polyethylene coating safeguards quality by keeping moisture and contamination away from the sugar. Each packet will empty quickly and completely, eliminating waste.

Coatings based on BAKELITE Brand Polyethylene improve the efficiency of countless packages. Applied to paper, cloth, metal, foil or film — they will improve sales appeal — prevent contamination — add strength and toughness and provide strong heat sealability. Since polyethylene is tasteless, odorless, flexible, cold-resistant and economical, it is a highly successful coating for food packages. Specify BAKELITE Brand Polyethylene yourself. It protects so much . . . so much better.

Ask your packaging supplier about **BAKELITE** BRAND **PLASTICS**

UNION CARBIDE

GET YOUR FREE COPIES . . . For a variety of ideas on the use of BAKELITE Brand Plastics in packaging, send for our "1958 Guide to Improved Packaging" and "The Role of Polyethylene in Creative Packaging and Successful Selling." Write Dept. AP-105.

BAKELITE COMPANY, *Division of Union Carbide Corporation*, 30 East 42nd Street, New York 17, N. Y.

The terms KRENE, BAKELITE, UNION CARBIDE, and the Trefoil Symbol are registered trade-marks of UCC.

1. Gummy Products
2. Greasy Products
3. Caustic Soda
4. Fertilizers
5. Dehydrated Foods

These low-cost, high performance, flat-pack bags can replace drums!

By incorporating a barrier of aluminum foil, they give maximum protection against moisture, odors, gases . . . hold products never before successfully packaged in multiwall bags.

Laminated Alcoa® Foil produces bags that are resistant to acids and alkaline products . . . other laminations with high-strength papers will hold chemicals, pigments, foods, greases, bulk pharmaceuticals, and other problem products.

Four important advantages to the consumer and the packer

- Greater product protection under severe storage conditions
- Longer storage life possible
- Ease of handling, shipping and stocking
- No returnable drums to bother with—a money saver for consumer, packer, manufacturer

Contact your nearest multiwall bag manufacturer—Alcoa doesn't make multiwall bags, but supplies foil to bag manufacturers, who can design bags to fit your particular product needs. For the name and address of the manufacturer nearest you, and to get further information included in our booklet, "New Alcoa Foil in Multiwall Bags," fill in and mail the attached coupon.

ALCOA
ALUMINUM
ALUMINUM COMPANY OF AMERICA

NEW!
"ALCOA THEATRE"
Exciting Adventure
ALTERNATE MONDAY EVENINGS

Aluminum Company of America
1649M Alcoa Building, Pittsburgh 19, Pa.

Please send me the name and address of the manufacturer of Alcoa Foil foil-ply multiwall bags who is located nearest to me, and also your booklet, "New Alcoa Foil in Multiwall Bags."

Name.....

Street.....

City.....State.....

Report from P.I.

The 19th Annual Forum of the Packaging Institute

Three meeting halls of the Hotel Statler were on a "standing room only" basis during most of the three days of the 19th Annual Forum of the Packaging Institute in New York, Oct. 28-31. Registration went over 1,500 and thereby topped the previous record of just under 1,500 in New York two years ago, while exceeding by 50% the attendance last fall at the Cleveland affair held in conjunction with the first Packaging Machinery Show.

In all, 60 papers were delivered at nine seminars, three luncheons, the annual members' meeting and the first annual Awards Dinner.

In the keynote address, Frederick S. Leinbach, executive vice president of the Riegel Paper Corp. and a past president of the Institute, said the 1960s will belong to those who sell. He urged Institute members to plan now for the part packaging must play in selling tomorrow's products.

T. F. Davies Haines, president of Ciba Pharmaceutical Products, Inc., was the featured speaker at the Tuesday luncheon, which had a record attendance of more than 500, while Wednesday's luncheon featured a presentation in the production and handling techniques of *Life* magazine.

At the annual business meeting, A. Douglas Murphy of the Esso Standard Oil Co., P.I. president, was re-elected for a second term along with his complete slate. Three new directors were named: Allyn C. Beardsell of Container Laboratories; Harold W. Edwards of Lever Bros. and Ray M. Schmitz of General Foods Corp. Amendment of the constitution to provide a new class of Professional Membership for qualified individuals was approved.

At the Awards Dinner on Monday night, Karl E. Prindle of the Dobeckmun Co. was disclosed as the first winner of the Institute's Professional Award for individual accomplishment in packaging and was given a standing ovation as he received a bronze plaque from President Murphy. Mr. Prindle was cited as the inventor of moistureproof celiophane and for other work he has accomplished in the field of plastic films for packaging.

Philip Morris, Inc., pioneer of the flip-top box in the cigarette field, won the 1957 Corporate Award of the Packaging Institute. George Weissman, vice president and director of marketing for Philip Morris, accepted the award.

Terry M. Brown of Pontiac, Mich., received the first MODERN PACKAGING Research Fellowship Award, which provides $2,000 annually to support a graduate research student at Michigan State University. The award was presented by Lloyd Stouffer, editor of MODERN PACKAGING.

The first National Starch Products-Packaging Institute Packaging Engineering Scholarship, providing $400 a year, was presented by Frank Greenwall, president of National Starch Products, Inc., to Ralph R. Showerman of Portland, Mich., currently a freshman at Michigan State University.

Modern Packaging's first Research Fellowship Award is presented to Michigan State graduate Terry M. Brown by editor Lloyd Stouffer. The award provides $2,000 annually to support a graduate research student at Michigan State University.

Leonard J. Wood, paper development and service manager, National Starch Products, Inc., won the Institute's 1957 T.O.C. award, presented each year to the individual judged to have contributed the most informative paper of greatest technical value at the Forum.

The Institute's Gustav Lange scroll was awarded to John Clay, National Starch Products,

Inc., for his contributions as chairman of the 17th and 18th Annual Forums.

It was announced that next year's Annual Forum will be held at the Edgewater Beach Hotel, Chicago, Oct. 13-15, while the Technical Operations Committee will conduct a "junior forum" in connection with the 2nd Annual Packaging Machinery & Materials Exposition at Atlantic City, March 24-26. The Machinery Show is sponsored by the Packaging Machinery Mfrs. Institute. In 1959 the Annual Forum is expected to return to New York.

Chairman of the program for the 19th Annual Forum was N. W. Postweiler, Riegel Paper Corp., assisted by the chairmen of the 11 seminar sessions. A summary of these sessions follows, with the remarks of the speakers condensed and paraphrased.

Package-marketing seminar

Opening remarks, DAVID S. HOPPING, *Celanese Corp. of America.*

Chairman, J. GORDON LIPPINCOTT, *Lippincott & Margulies, Inc.*, Industrial Designers. This is the first time a Packaging Institute Forum has featured a discussion of packaging as it affects the marketing and merchandising of products, said Mr. Lippincott, pointing out that the package is a prime mover of products from the shelves of retailers to the homes of consumers. Some manufacturers, however, still do not realize how hard their package must work for them every step of the way from the time it leaves the factory until it is thrown away, empty, by the consumer, he said.

Packaging in the Changing Markets for Foods—JOSEPH H. WEAVER, *Manager of Advertising Services, General Mills, Inc.* Every package today is dictated by self service. It must be the real link between manufacturer and consumer. But full attention to the package is still pretty spotty. Manufacturers of packaged goods have not yet really been getting out of the "me-too" strategy. Mr. Weaver cited the conventional cookie carton as an example. Aside from improved full-color printing and improved graphic techniques, he said, it has not changed very much in the last 25 or 30 years. It's still pretty much the same size and shape, says "to open, slit along the dotted line," which no housewife ever does. He stressed the importance of continuous package appraisal. In today's markets, a manufacturer is lucky if a package lasts two years without change. A few years ago the identifying logotype was considered the most essential design element. Later the full-color product illustration became the chief interest. More recently the symbol package became the thing—the bigger spoon or a swan to identify brand. Today consumers are looking for "this year's model"—something Detroit and Paris have known for years. With 6,000 new food packages coming out every year, packagers are going to have to be continually more new-look conscious.

Rising costs present a danger and a challenge, Mr. Weaver said. There is a tendency to shun the new for cost reasons and compensate by downgrading. To prevent this from happening is a challenge to machinery and material suppliers to develop more efficient methods and packaging that will improve standards without increasing cost.

New Opportunities in Hard-Goods Retailing—D. J. LEEKER, *Manager, Informative Packaging & Labeling Div., Sears, Roebuck & Co.* Sears makes 70% of its sales during 30% of store hours. Customers often outnumber sales people 20 to one, Mr. Leeker stated. It would be impossible to sell today without the self-selection package at work at the point of sale. The package must be functional from the time it leaves the factory until it reaches the home of the consumer.

Hard lines to a great extent have been neglected, yet they represent big business. Billions of dollars each year are spent on these items that range from work-saving kitchen gadgets to elaborate do-it-yourself kits. These hard lines would represent bigger business if better, more convenient and completely functional packaging were used to accelerate their sales.

Many new opportunities in hard-line retailing can now be realized. We must use the new and exciting packaging materials and techniques available. The squeeze bottle, the aerosol container, foils, films, thermoplastics, new paperboard and corrugated products all have created new marketable items.

Take these new materials, add a little imagination and apply their convenience and speed of handling to this made-to-order market and the hard-lines package of tomorrow will be here today.

Mr. Leeker illustrated his talk with slides of self-selling Sears packages: automotive points in Tune-Up Kits that have quadrupled sales; wood screws that moved out front in paperboard packages with see-through butyrate sleeves; nails in cartons designed for merchandising in display fixtures; paint brushes with acetate sleeves; spark plugs in multipack window cartons that assure sales of six and eight plugs; fishing tackle in easy-to-select and easy-to-inventory vacuum-formed packaging.

The Coming Role of the Package in Department-Store Merchandising—G. R. BELL, *Superintendent of Services, J. L. Hudson Co.* The most costly part of retailing is distribution, and packaging offers one of the greatest potentials for reducing the cost of retailing. Mr. Bell asked manufacturers to join department-store retailers in studying the problems throughout the distribution cycle to lessen the profit squeeze. About 30% of the merchandise now received requires supplementary wrapping by the store to complete sales, he said. A 1% sales loss due to soilage and markdowns is caused by bad packaging. Stores recognize that proper pre-packaging reduces handling costs and it is accepted policy today to have manufacturers do the packaging. He cited specific ways in which packaging could be improved: more unbreakable containers, more corrugated containers with built-in carrying handles for take-home, more easy-opening tear tapes on cartons, standard locations for price marking and pre-marking, more look-through packaging, more standardization for utilization of fixtures, more packaging suitable for purchase as gifts (average shopper buys 50 gifts a year) and more packaging that saves warehouse space and shipping weight.

Packaging for Sales in the Small-Appliance Field—D. L. MCFARLAND, *Manager, Product Planning, General Electric Co.* Americans spend $2½ billion a year for the purchase of 140 million small appliances. And 50% are bought as gifts. This has called for re-examination of the effectiveness of appliance packaging, Mr. McFarland stated.

If a package is to be effective as a sales tool, it must be designed to suit the conditions which exist at the point of sale, or it must change the selling pattern in a way to increase sales without a proportional increase in a new approach to the package.

Because of the pre-selling power of national-magazine advertising, network television and strong local promotions, the package is beginning to serve a new purpose in the small-appliance field. It must have greater visual appeal and be more attractive for the gift purchase. Costs for added graphic attraction and convenience are more generally being allocated to sales promotion.

Product features are being more prominently illustrated to tie in with advertising appeals, serving as an aid to the sales clerk and even as a self-selling tool for the shopper. In-pack counter-display material often serves the double purpose of being a structural support.

The Future of Packaging in the Textile Field—WARREN E. DRURY, *Resident Manager, America's Textile Reporter.* Essential needs of the textile industry which packaging can help to fulfill were pointed out by Mr. Drury as: (1) broader distribution into new outlets and (2) more automation of packaging in the mill. Textiles must win new outlets in food, hardware and drug stores, in filling stations and transportation terminals, even in vending machines, the same as broader distribution has brought increased business to soft-drink and cigarette industries. Before consumers want more textile products, they must be exposed to them more often. And packaging is the only way to bring these products into new outlets.

Mr. Drury cited spectacular examples—packaged hosiery sales up from 2.6% to 12.9% of national volume in food stores, while sales in department stores decreased from 43.7% to 37%; a 67% increase in Exquisite Form brassiere sales resulting from the company's new twin pack. (See "New Proof for Bras," MODERN PACKAGING, July, 1957, p. 124.)

He asked packaging-equipment manufacturers for improved machinery to eliminate costly and time-consuming packaging operations. The textile field, he said, wants machines to apply polyethylene film wraps at the rate of 40 to 50 per minute without the use of stiffeners. The trend of the times was indicated, he said, by the recent Supermarket Sundries Exposition, at which 82 of the 185 exhibitors were textile firms. But if markets are to be increased, the industry must have better packaging and machinery to do this packaging mechanically and economically.

Packaging research and development seminar

Chairman, WALTER J. BYRD, *Standard Brands Inc.*

Aluminum Cans—CHARLES R. NASH, *Vice President, Aluminum Limited Sales, Inc.* Aluminum has a great future in canning, even though it may not assume a major place in the field overnight, Mr. Nash said. In the smaller cans and special packs, there is a good place for aluminum to gain wide acceptance in the near term.

The future of the light metal in canning depends on the speed with which the aluminum industry can improve the art of sheet rolling and, consequently, lower the cost of sheet and slugs from which can bodies are produced.

Aluminum Limited is doing extensive research in rotary casting of aluminum. The process has been successfully applied to casting rod and bar, and its evolution to casting strip for cans will be a natural development.

European practice in making aluminum cans will have some influence on how the U.S. market develops. In Europe some 200 products are packed annually in nearly 300,000,000 aluminum cans.

Thermo-Stik—W. T. BOUCHELLE, *The Lord Baltimore Press, Inc.* An important development in package construction, filling and sealing has come into considerable use in the past 12 months, Mr. Bouchelle stated. This process is known as Thermo-Stik. It makes use of newly developed adhesives, automatic machinery and carton-manufacturing techniques to deliver a variety of items—from frozen foods to baby cereals—in one-piece, tightly sealed cartons at production speeds never before practical.

The purpose of this new-type carton is to produce a less complicated package that will do a better job. It does this by meeting the three essential requirements of a container: (1) simplicity, (2) economy and (3) appeal to the consumer. The heat-bonded package is simple because it uses only one piece of material. It is economical because it can be run at speeds of 250 packages a minute. Also, because of the exceedingly strong bond, greater strength is achieved and thinner board—15 point, or even 12 point—can be used. Consumer appeal is assured because printing processes have been developed and refined to produce beautiful graphic-arts effects.

Water-Vapor-Transmission Rates—PAUL K. WOLPER, *Packaging Supervisor, Riegel Paper Corp.* The work of the TAPPI-PI liaison Packaging Materials Testing Committee was discussed and a progress report was given by Mr. Wolper concerning various test methods that the committee is now reviewing. The significance of water-vapor-permeability measurements was discussed in the light of present activities of the committee.

Poly on Mylar Vacuumized—BENJAMIN LECHNER and PETER C. HITT, *Print-A-Tube Co.* Skin packaging, which is the process of drawing a film down skin tight around an object and sealing it to a paperboard base, has been handicapped up to this time by the fact that the conventional films would not seal directly to plain paperboards. These boards, therefore, had special coatings applied to them and perforations were punched in the boards to allow a vacuum to be drawn through them (which is the method of getting the film skin tight around the object). P.O.M.V., a combination of polyethylene and a specially treated "Mylar," is a new film that permits the use of uncoated and unperforated paperboards for this process, Mr. Lechner reported. The use of this film, which is approximately the same price per square inch as the existing films, reduces the cost of the paperboards that can be used. Because of the great strength of "Mylar," P.O.M.V. can be used in very thin gauges. In addition, because of its mechanical characteristics, P.O.M.V. permits the speed-up of the cycle of packaging and opens the door to automation of the skin-packaging process.

Mr. Hitt reviewed the costs of the various materials used in skin packaging and pointed out that P.O.M.V. because of its thin gauge is as economical as any other plastic employed for skin packaging.

Advantages of Glued Manufactured Joints on Corrugated Cases—RICHARD J. ROBERTS, *Container Corp. of America.* The strength and quality of a glued manufactured joint, coupled with the increased efficiencies of a high-speed operation, have tended to increase the trend toward this type of closure, according to Mr. Roberts. The success of this operation has been one of the major advantages in the corrugated industry and has opened the door to other advances regarding quality and development. It has made high-grade quality printing economically feasible for large-volume uses and in the near future will quite conceivably effect a radical change in purchasing methods and container design as we know them today.

Light Weighting of Glass Containers and Coatings—HAROLD L. EASTMAN, *Manager of Statistical Quality Control, Anchor Hocking Glass Corp.* Important progress has been made in the light weighting of glass, Mr. Eastman stated, which means using less glass to make a package holding the same amount of product. Savings in handling and shipping costs result when container weights can be reduced. Weight reductions of 10% or more are not uncommon. In 1930 a quart milk bottle weighed 26 ounces. Today's modern milk bottle weighs 18 oz.—a saving in weight of a half pound. Similar impressive reductions have been achieved for beer bottles and many food and liquor packages. Quite often changes in shape and design have been the key factor in light weighting glass packages. However, each individual design must be studied carefully and consideration must be given to all conditions of use. The

relationship of shape to container weight and strength is especially significant in the design of glass containers. A table showing some of these relationships for cubes and various cylindrical shapes was discussed.

Another approach to better glass performance is through the use of coatings. Preserving the original high strength of glass has been the goal that has led glass-container manufacturers to apply coatings and thereby reduce friction between containers. The ideal material must meet exacting requirements. It must be invisible, easy to apply, water insoluble after application. It must have good lubricity, high puncture strength. It must be non-toxic and permit easy labeling.

Among the coatings now in use are sulphur, metallic oxides, wax-type coatings, resins and silicone oils. Each has some definite limitations and, accordingly, the search for better coatings is being pursued with increasing vigor. The resin coatings possibly offer the greatest promise at the present time.

Fiberglas Reinforcements for Packaging Materials—WILLIAM J. CLARK, *Owens-Corning Fiberglas Corp.* Use of Fiberglas textile products as a reinforcement for paper, tape or bag products offers high tensile strength, small diameter and resistance to temperature extremes, according to Mr. Clark. Translated to finished products, these advantages spell out a variety of papers that are stronger, smoother, lighter weight and less bulky. Tapes used for reinforcement can provide greater strength with less thickness—one thickness of Fiberglas-reinforced tape is equal to a triple thickness of ordinary tape for carton corner reinforcement and the like.

Principal use of Fiberglas-reinforced papers at the present time are for: (1) waterproof case liners, (2) waterproof wrapping papers, (3) shroudings for protection of goods in transit such as lumber, (4) unitizing or case-good shipment protection and (5) temporary tarpaulin for low-cost outdoor storage.

Developments now under way point to further uses in the reinforcement of extruded films and in the integral reinforcement of paper sheets by the addition of glass fibres to the pulp furnish. The result will be an upgrading of these materials, producing better strength and performance characteristics. Polyethylene is one of the extruded films that quite possibly can be upgraded by reinforcement with glass fibres.

Fibre Box Award Winners—CHARLES A. LEWIS, *Director, Containers and Packaging Div., Dept. of Commerce, Business and Defense Services Administration.* Color slides illustrating the prize winners in the fourth annual competition held by the Fibre Box Assn. were shown by Mr. Lewis. Important trends were pointed out, including the strides being taken in developing new constructions for bulk and high-density products. Accomplishments in surface design and printing showed outstanding progress. (See "Prize-Winning Fibre Boxes," MODERN PACKAGING, Nov. 1957, p. 154, for illustrations of the various award winners and a discussion of the prize winners in 10 end-use classifications and six specialty groups.)

Bleached board applications seminar

Chairman, MILTON YEZEK, *Carton and Container Div., General Foods Corp.*

Manufacture and Characteristics of Bleached Board—V. V. VALLANDIGHAM, *Potlatch Forests, Inc.* Use of bleached board has grown from 100,000 tons in 1940 to 1,200,000 tons in 1956, Mr. Vallandigham pointed out. Because of the wide variations possible in the manufacture and characteristics of bleached board, users should supply a mill with detailed specifications on the end use so that the manufacturer can intelligently build the correct sheet. Packagers, converters, board manufacturers and ink suppliers must all cooperate in supplying the correct techniques and supplies to insure a top-quality packaging product.

Functional Coatings and Adhesives on Bleached Board—L. J. WOOD, JR., *National Starch Products, Inc.* Recent advances in packaging technology have created increased demands for protective and functional properties in a packaging material, Mr. Wood stated. The question is, how can bleached board help to meet this obvious need for functional properties in the package? The challenge is being met by producing functional machine coatings on bleached board that possess enhanced properties of grease, stain and water resistance, as well as improved decorative and printing properties. The paper-cup industry, a pioneer in the use of this coated board, is an example of how these functional coatings have helped to provide economical improvements in a package. These same advantages obviously make functional coatings suitable for many other applications. This was illustrated by a slide projection showing how the use of functional coatings can tremendously reduce or, in some instances, even eliminate the use of expensive conversion coating resins.

Typical formulas were then given for air-knife and roll-coating techniques, and the merits and problems of size-press coating were discussed. The speaker declared that further improvements are required in size-press-coated board to make it suitable for many potential uses.

Since the production of improved hold-out surfaces tend to alter the adhesion characteristics of the board, a brief review of the theory of adhesion was presented. Those properties which produce good functional coatings are the same properties that make the use of low-cost adhesives difficult. But, proper coating formulation can produce good functional properties in the board without presenting major adhesion problems.

At present, machine pre-coating that adds some—but not all—of the protective properties seem most practical. This reduces the amount of final converter coating necessary and thus cuts cost of the board. Resin-pigment combinations seem very suitable for this purpose and the development of vinyl-acrylic-copolymer coatings has been a big advance in machine coating of boards. In the future, there will be a complete scale of coated boards, ranging from completely protected products to boards with light pre-coatings for converter treatment.

Printing and Converting of Bleached Boards—WILLIAM C. HASSELO, *Container Corp. of America.* There has been much progress in bleached boards, but more is necessary, according to Mr. Hasselo. At present, clay coatings sometimes loosen and ink odors can occur because of chemical reactions with bleach residues. Dryness in boards cause warpage and loss of strength. Dusting in food packages is a critical problem. This latter could be corrected by clean, sharp cutting machines and dust-removal equipment. Non-uniformity of boards is widespread and seems to stem from variations in pulp rather than in mill techniques. These variations cause major differences in printing results, as was demonstrated with several samples.

Heat-Seal Forming Equipment—SYDNEY R. PHIN, *Package Forming Machinery Co., Ltd.* Mr. Phin illustrated heat sealing of plastic-coated food containers with a series of slides showing set-up and closing equipment. He noted that spot heat seals can now be applied on printing machinery and exhibited several cartons that could be handled on conventional packaging machines. The big future in such packages, he concluded, lies in polyethylene coatings, because of the low price of this material and the recent improvements in the product.

Bleached Board as Corrugated Liner—WILLIAM T. NYE, *Gaylord Container Corp., Div. of Crown Zellerbach Corp.* Bleached linerboard for shipping containers is coming of

age. Mr. Nye said, and measuring techniques for brightness and whiteness are being developed so that accurate specifications are now possible for this material. Modern merchandising techniques in self-service stores and the trend toward take-home, multi-unit containers has made it necessary for shipping containers to be not only sturdy, but also attractive. Bleached linerboard makes the shipping container an effective silent salesman. Not only does the material itself provide a distinctive appearance, but it affords superior printability and a better surface for over-all pastel colors.

Quality Control Aspects of Bleached Board—WILLIAM SCHOENBERG, *Lord & Schoenberg, Inc.* The effect of moisture content on other physical properties of bleached board is extremely important, according to Mr. Schoenberg. Dimensions, tear strength, Mullen strength and tensile strength all vary with moisture content. Since these characteristics play a vital role in folding cartons and other types of packages where bleached board is used, the techniques for measuring moisture content become critical. These measurements must be accurate and are not as simple as many manufacturers and users imagine. The tests should be conducted as near the point and as close to the time of manufacture as practical. Despite proved examples that moisture tests by meter are nearly twice as accurate as the oven-testing technique, the oven is the most generally used method.

Many errors have been revealed in plant oven tests. Technicians should make sure that the temperature of the oven —particularly large units—is uniform throughout. Scales should be zeroed daily. In the case of inside-oven scales, however, this should not be done until the oven is up to operating temperature. Weighing inside the oven is preferable, since board can regain a considerable amount of moisture outside the oven in a matter of seconds.

Bleach Board for Milk Containers—T. E. DOBBINS, *Technical Service Div., American Can Co.* Single-service paper containers for fluid milk were introduced in the United States as early as 1906. However, successful commercial use did not take place until the mid-1930s, Mr. Dobbins pointed out. Today, fibre milk-container sales are approaching an annual level of 14-billion cartons. And the paper packaging of milk is spreading rapidly to many other countries throughout the world.

The key raw material in fibre milk containers is bleached paperboard derived from virgin wood pulp. In all four major types of cartons now in use, this paperboard is manufactured to rigid standards that include strength and rigidity, water resistance, acceptance of wax or plastic films, brightness and color, and printability. Overshadowing all other standards, however, are the strict sanitary requirements. Extensive test results—one series of which involved evaluating over 172,000 individual containers in an eight-year period—have demonstrated to public health officials the sanitary excellence of these single-service paperboard packages.

Bleached Board and the Flip-Top Box Story—HERBERT A. ATKINS, *Philip Morris, Inc.* The rise in filter cigarettes—which has grown from 2% of annual pack in 1952 to 30% in 1956 and will probably be 40% in 1957—has also triggered the flip-top box, Mr. Atkins stated. Philip Morris, Inc., began as early as 1952 to look into new ideas for packaging cigarettes. By 1954 the flip-top box was developed and put into production. This marked the introduction of solid bleached sulphate board in the cigarette industry. Philip Morris alone will use 15,000 tons of this material in 1957. It is quite possible that all filter-tipped cigarettes will soon find their way into flip-top boxes. Should this happen, usage of this type of board by the cigarette companies would zoom to about 75,000 tons per year.

Bleached Boards in the Frozen-Food and Ice-Cream Industries—DAVID B. ANDREWS, *Product Development Dept., Marathon Corp.* The American housewife, influenced by public schooling on hygiene, has a subconscious, if not conscious, awareness of the color white as associated with sanitation, quality and wholesomeness, Mr. Andrews stated. Thus, early in the growth of dairy-made ice cream, the solid bleached carton became the recognized standard, not only because of its color, but because of its protective and resistant nature. Packaging problems in the frozen-food industry are similar to those of ice cream, except that the much longer storage period requires extra-high protection. Large packs have made packaging automation a very important factor and the machine workability of bleached cartons has been a major factor in their widespread use for consumer packaging.

The last dozen years have seen new specialized packaging speed comparable to the canning industry. The vegetable industry got its start with the folded, top-opening carton line, which has been followed by 300-per-minute end-filled carton machines.

Prepared foods, too, are speedily packaged with specialized machinery utilizing horizontally filled, end-opening cartons. These machines have been a major factor in lowering costs. In every case, the solid bleached carton's great efficiency in machine workability has influenced its acceptance.

Long-range trends point towards new machines and new bleached-board packages—utilizing coated plastics, laminations and thermo coatings—for even greater packaging efficiency.

New Packaging Applications of Round Nestable Paper Cups and Containers—PHILIP A. STOKES, *Field Research Dept., Dixie Cup Co.* Slides were displayed by Mr. Stokes to demonstrate the range and style of round, nested containers and of automatic equipment for filling and closing them. Among the new ideas shown and described for extending the versatility and use of these packages was a printed coupon on either lid or body of the container for promotional sales and seasonal printed designs on a stock container to be used with a special printed lid containing legal copy and brand name of the user.

Slides also pictured new-product applications for round containers, such as meats, mushrooms, candy, sausage, honey, worms for bait, and jams, jellies and cream in smaller cups.

Bleached Paperboard Applications in the Meat Industry—FRANK YANKOVIAK, *Research & Engineering Dept., Sutherland Paper Co.* Several factors that influence the physical and optical properties of meat must be considered in manufacturing bleached paperboard for packaging these products, Mr. Yankoviak stated. The most important point is the functional capability of the package. The other related factors are the converting operations, including printing, cutting, functional treatment and gluing. The product being packaged and its use level must be known, however, before a scientific approach can be taken in these matters. Products are now packaged at the packer level and prepackaged at a retail level. The point of packaging and the specific meat packaged usually dictates the shelf life of a carton and thereby influences the treatment which must be used. Paperboard manufacturers must receive proper guidance from experts in each of the aforementioned fields so that this knowledge may be used to advantage in designing a paperboard intended for meat packaging.

For meats, backing boards, trays and cartons must possess maximum stiffness—utilizing 16 to 24 pt. and even 30 pt. boards. Titanium oxide is frequently employed in the manufacturing process to avoid discoloration from meat fats. Brightness of the board has become more and more critical, with the blue-white shades being preferred for today's merchandising. Letterpress is still the most common

Karl E. Prindle, the first winner of P.I.'s Professional Award in packaging.

method of printing used on these packages, but lithography and rotogravure are becoming more popular.

Inks used on meat packages must resist smearing, scuffing and heat. Also, raw carton edges must be covered with wax to prevent penetration by meat fats.

Tetra Pak—A New Food-Board Container—DR. J. S. BARTON, *Packaging Research & Development, Crown Zellerbach Corp., Western Waxide Div.* A new tetrahedral packaging form, Tetra Pak, is a Swedish development that is just attaining commercial status in the United States, Dr. Barton pointed out. The first pilot-model machine and package were made in 1944 with the object of developing an improved and more economical retail milk container. During the period 1944-1952 much development work on the machine and packaging materials was carried out, leading to the conclusion that a polyethylene-coated bleached kraft board was the most practical material. In 1952 the first commercial dairy installation was made in Sweden and from that time on, machines have been installed on all continents. The containers vary in size from ½ oz. to 1 qt. and six different machines are used to cover this range. In Europe a wide range of dairy products is being packaged, as well as citrus juices, honey, syrup, fruit jellies and pureed spinach. In the United States the first users of Tetra Pak have been dairies packaging milk, cream, chocolate milk, ice creams and sundae toppings.

The attractive features of this container for the consumer include low cost, strength and leakproofness, cleanliness and easy disposability. For the packager, the use of Tetra Pak means economy, small storage space, and simple and rugged packaging equipment that operates at speeds of 60 to 90 containers per minute.

Both bleached kraft and sulfite stocks have been used as the base sheet for Tetra Pak. A certain amount of wet stiffness is required and the surface finish should promote good polyethylene-film adhesion. Probably the most important property of the converted stock is "form stability," which appears to be related to stiffness and moisture resistance. In addition to bleached-kraft stocks, various combinations of aluminum foil, bleached board and polyethylene are being evaluated. Saran, Mylar and nylon coatings are also being considered for applications where polyethylene cannot give protection.

Drug and pharmaceutical seminar

Chairman, C. B. BURNSIDE, *Eli Lilly & Co.*

Today's Package Development—Tomorrow's Profit—JOHN A. WALLS, *Rexall Drug Co. (Moderator, morning session).* Tomorrow's profit depends upon the care and planning which goes into today's package development, said Mr. Walls. How well has that job been done? Part of the answer could be taken from a statement by Booz, Allen & Hamilton—management research specialists—appearing in the October, 1957, issue of *Fortune.* After surveying 120 major companies last year, they concluded that two-thirds of all research projects failed to produce useful results. In no company was the failure rate found to be less than 50% and in one instance it was reported to be 99%.

The National Wholesale Druggist Assn. estimates that 832 products were introduced to drug wholesalers in 1953. Of the products offered by new manufacturers, well over 90% died in their first year of marketing life. New products offered by seasoned manufacturers had a mortality rate of 40 to 50%.

All is not as dark as it seems. The pharmaceutical industry as a whole estimates that 60% or more of its present-day sales and an even higher percentage of its current profits are accounted for by products it did not have five years ago.

How much of a job is in front of us? A clue can be found in figures published by the Federal Trade Commission and McGraw-Hill for 1955-1959. Sales growth during this period for the chemical industry alone is expected to reach just under $8 billion. Of this total, better than one-half will come from new products not produced in 1955.

The fight for the consumer's dollar is getting tougher. For almost all items in the package-goods field we have lost that invaluable ally, the sales clerk behind the counter.

Management's concern with the problem of getting from an idea to the cash register rests with package development.

What is Package Development?—G. J. SCHLECK, *Manager, Package Development Dept., Merck & Co., Inc.* By analysis of the functions of package development, we find it compiles activities and considerations from all areas of the company. For example, product research, marketing, purchasing, production, engineering, warehousing and shipping, promotion, legal and accounting, said Mr. Schleck.

Organization of the elements for package development is non-standard and varies with each company. An analysis of the degree of importance of each element in relation to: (a) company products and market, (b) company philosophy and goals, (c) stature and ability of personnel, (d) strength and ability of existing related functions will determine package development requirements. Results of such a study will also outline the proper framework for organizing package development and point up weak spots.

Package Development at Procter & Gamble—R. E. BELLIVEAU, *Head of Package Development Department, The Procter & Gamble Co.* Procter & Gamble aims for package shelf life of two years or more and all tests are directed to that objective. The work is carried out by technical specialists in packaging and the packaging materials of which the packages are made, according to Mr. Belliveau.

Packaging is one of the vital steps in the merchandising of Procter & Gamble's products. It is the responsibility of the packaging development department to establish the technical requirements of the package to meet product and merchandising needs.

In accomplishing this work, an important part of the job is the liaison work required with many of the other departments in the company and with many outside companies which are suppliers of package materials or services. Procter & Gamble believes in sharing the job with suppliers for guidance to the general objective, often paying its obligation for research.

Inside the company, one of the major contacts is with the advertising department, where package development work is carried on jointly with the art section, which has the prime responsibility for coordinating the art and merchandising aspects of the package.

Packaging development also works very closely with the product development department on questions of prod-

uct behavior, product evaluation during package testing, and use conditions of the package-product combination.

Responsibility within the package development department is delegated on a brand basis. Each packaging engineer is responsible for a group of related brands, selected so that the number of individual contacts required to do the job is kept within desirable limits.

Mr. Belliveau illustrated his talk with slides of the company's new package research laboratories.

Facilities, Standards and Personnel for Package Development—H. E. NACK, *Packaging Consultant.* New materials and mechanization make over-all coordinated packaging procedures increasingly more essential to evaluate in order to make decisions quickly. It's the only way to keep one jump ahead of the competition today, said Mr. Nack. Therefore, it is not necessary to justify the need for a coordinated package development department, including a testing laboratory, as a necessary requirement in order to maintain the high standards required in today's competitive market.

The packaging executive in charge should be concerned chiefly with the cost, producibility and protection of his package and be thoroughly familiar with the hazards of transportation and shelf life.

The responsibilities of the package development department vary widely from company to company to the extent that no rigid routine can be recommended. However, there are four records or forms which are essential—a material or purchase description, a package specification, a package approval form and a discontinuance notice. The forms constitute a permanent record of all activities and decisions, and may prove valuable to establish prior art in the event of legal entanglement.

The packaging committee should be limited to the top-bracket men necessary to decide on type, construction, protection and producibility. Other factors can be determined out of committee.

The tremendous importance of packaging today requires that package development should no longer be considered a sub-department, but should be responsible to top management only, in order that it can cooperate with other departments or divisions at the same level.

New Packaging Horizons—C. V. PETERSON, *Package Development Dept., Ciba Pharmaceutical Products, Inc. (Moderator, afternoon session).* Mr. Peterson touched briefly on the increasingly more complex problems of drug packaging in view of the rapid development of new products in the pharmaceutical field and praised the technical skills of the packaging experts in this industry as represented by the speakers on the panel.

The Collapse of Time—L. H. ZAHN, *Manager, Methods & Package Development Div., Ciba Pharmaceutical Products, Inc.* It is likely that the pharmaceutical industry may be called upon in the near future to develop certain drugs which would help man sustain his arduous space-ship trip to the moon. Three weeks ago this would have sounded fantastic, said Mr. Zahn in his imaginative talk on things to come, aimed to stimulate creative thinking about technological advancement.

In pharmaceutical packaging, we have not progressed so rapidly as we should. The vast array of new material developments in the past 10 years we have accepted much too slowly. The science of medicine has outrun the science of its counterpart, pharmaceutical packaging. It is time we pull ourselves together to design and to produce packages with more functional uses. We owe the doctor and pharmacists a better package—not just a gimmick. We all know that a tamperproof package is badly needed in our industry.

The message Mr. Zahn said he wanted to drive home: "It's later than you think." Every industry will have to improve at a faster rate than it has in the last 50 years, or it will be left behind with the earth dwellers.

Genetron Plastic Film and Tubing in Packaging—ROBERT KURTZ, *Sales Manager, Unette Corp.* Mr. Kurtz discussed the properties of Genetron plastic (a fluorocarbon compound) developed by Allied Chemical & Die Corp. and some of its possible uses for films and unit packages. This new colorless material, which can be made available either for molding or as a film, apparently has a high melting point, supposedly will withstand steam or radiation sterilization, is inert to many difficult chemicals, has negligible water-vapor transmission, is non-toxic, has high impact strength and shock absorption.

Mr. Kurtz also discussed small unit containers for single doses and sampling, citing as an example a ⅓-cc. container for an ophthalmic product to dispense just a few drops.

It Helps if You Know Where to Look—CHARLES E. LEWIS, *Director, Containers & Packaging Div., Business & Defense Services Administration, U.S. Dept. of Commerce.* The modern salesman no longer turns up his nose at statistics, said Mr. Lewis. He depends on a wealth of facts to plow the ground ahead—to show where his customers are, what competition he has. And the Government is a good place to find these facts, he pointed out, citing impressive forecasts on population growth to 193,000,000 by 1965 and 209,000,000 by 1970. Gross national product was $229 billion in 1947, will reach $434 billion by the end of 1957 and is expected to almost double again in the next 10 years. Mr. Lewis staggered his audience with a 20-to-30-ft.-long chart tracing the Federal debt from 1869 up to and including the next couple of decades.

He suggested the U.S. Government Organization Manual ($1.50 from the Superintendent of Documents, U.S. Government Printing Office, Washington 25, D.C.) as a good starting point to learn about Government statistical publications and statistical standards bureaus. He presented to those attending the session copies of a Bibliographical Index of Government Agencies Pertaining to Packaging. (Additional copies may be obtained by writing the Business and Defense Services Administration or through the Packaging Institute.)

Kel-F—Halofluorocarbon Plastic for Packaging—H. S. KAUFMAN, *Chemical Div., Minnesota Mining & Mfg. Co.* Kel-F plastics currently available in the form of sterilizable tubes, films and moldings, Dr. Kaufman pointed out, provide the pharmaceutical industry with a unique packaging material having the following properties: (1) sterilizable by steam or radiation, (2) heat sealable by thermal impulse or electronic sealing, (3) optically clear, (4) flexible and tough, (5) virtually zero alcohol, water and oxygen permeability, (6) may be ink marked or hot stamped for identification.

This combination of properties makes Kel-F plastics excellent replacements for breakable and bulky glass containers and also makes possible novel package designs. Kel-F plastics have been successfully employed in suture packaging (see "Enter: Fluorocarbon Film," MODERN PACKAGING, Oct., 1957, p. 158), parenteral solutions, ampoules, hypodermic syringes, combination one-shot package and syringe (Hypovial), vacuum-formed pouches and bottles. Countless other applications are available to the imaginative packaging engineer. Dr. Kaufman concluded with acknowledgment to J. H. Kushnick and R. A. Smith of 3M for collaboration in the preparation of his paper.

Bag and bulk packaging seminar

Chairman, O. J. BURKLAND, *E. I. du Pont de Nemours & Co., Inc.*

Stepped-End Multiwall Bags, J. R. MURPHY, *Multiwall Bag Sales, Owens-Illinois Glass Co.* There are, Mr. Murphy pointed out, four basic types of multiwall bags: (1) sewn open mouth, (2) sewn valve, (3) pasted open mouth and

(4) pasted valve. Growth that has been observed since 1953 in the pasted-valve category has resulted partially from the relatively new use in American industry of the stepped-end multiwall bag, a type of bag falling into this fourth classification. Among factors that will lead to greater use of the stepped-end bag are: it has neater appearance, it consumes less cubic area and it is a better bag for palletizing. In the stepped-end bag, the plies are first perforated before being formed into a tube and the plies are not flush. Although this bag was first developed and patented in Europe in 1927 and 1928, the original bag-making equipment was inadequate. This improved during the years, though big strides were not made until after World War II. The bag was introduced in the United States in 1948. About 200 million have been manufactured, most being used in the cement industry.

There are three types of stepped-end multiwall bags: the Diamond O, Hoppe and Gelbcke, the latter not in use in the United States. Construction differences on corners and in-line slits result in many variations of these basic types. In addition to cement, these bags are used to hold basic slag, fertilizer, sugar, chemicals and flour. An indication of the bag's potential is reflected in European use figures that show the stepped-end bag being used for 60% to almost 100% of the multiwall bags made in various countries. By the end of this year 13 bag manufacturers in the United States will have equipment to produce this bag. Two advantages of this newer bag are greater use of barrier sheets can be effected than in a standard pasted-valve bag and the stepped end reduces sifting.

Multiwall Bag Test Methods—G. T. STEWART, *Packaging Engineer, The Dow Chemical Co.* Packaging men agree, said Mr. Stewart, that the ideal bag test is one which will predict breakage when bags are shipped. However, there is little agreement on which present test method is best, as well as to what degree any of the present methods can give an accurate prediction of bag breakage in shipment.

There are many different tests being used today, the most widely used probably being the drop test. Though there are many variations of this, some of the more common types are the 4-ft. flat drop, the elevator drop and the rotation drop. As with nearly all tests, there are among these a difficulty in duplicating test results in the same or different laboratories and the difficulty to correlate test results with shipping results. Since results from rotation tests closely parallel those of the 4-ft. flat drop, it may be wise to use the more economical and faster 4-ft. method. Another test used is the incline-impact test. Several other methods are vibration, tensile, Mullen, slip, tear and puncture tests.

Bag failure results from weaknesses imparted to the bag during bag manufacture, handling prior to filling, filling and closing, handling prior to shipping, car loading and in-transit shock. If all factors but in-transit shock could be controlled, test problems would be greatly simplified. Among factors affecting bag strength are the bag paper used, bag structure, end closures and product contained in the bag. Bag testing today is not a science, but an art. It does, however, give good indications which should be intelligently interpreted by the packaging technical expert. In the future, better tests may be developed such as an expanding pressure device or a revolving drum.

Can-Handling Methods for Cost Reductions and Increased Speeds—L. HENNIG, *Supervisor, Product Handling Div., American Can Co.* Packaging is a broad word covering many facets, Mr. Hennig said. One that is sometimes forgotten is handling of manufacturing parts, such as cans. While many improvements have been made in can handling, most have been from an in-plant view only. Three new developments in can handling that accomplished savings from manufacturing plant to customers' operations were shown.

1. Machines to empty reshipping cartons of cans. Cartons are automatically opened, tipped upside down and reclosed as a top flap is gripped and held by two continuous belts. The cans spill onto a conveyor that moves them to a sorter that turns the cans right side up at high speed through a balance system that employs the heavier weight of the can bottom to accomplish this.

2. Mass-controlled handling of jumble cans. Specially designed trailers automatically dump cans onto a conveyor system that carries cans at high speed to keep pace with line speed. Random placement of cans on conveyor is converted to right-side-up arrangement on equipment as similarly used in method No. 1.

3. A unitized method of shipping and handling cans for high speed and lower manpower cost. While the first two methods accommodate high-volume, single-label cans, this third method enables a packager to employ high-speed handling for smaller and variable-label quantities.

Industrial Bulk Packaging, M. L. CROOM, *Engineer, Materials Handling & Packaging, E. I. du Pont de Nemours & Co., Inc.* The need for a thorough evaluation of the over-all costs of product packaging, handling and shipping must be stressed, as well as relative costs, Mr. Croom pointed out. Consideration should be given to both the shipper's and the customer's problems and their effect on over-all costs in arriving at optimum product-distribution systems.

Automation and mechanized handling have played a major role in the increased use of bulk packaging. Mechanical handling will have an effect on trends in industrial packaging.

The most pressing need at present in bulk packaging is for satisfactory expendable bulk containers. DuPont's experience and developments in this area are resulting in successful shipments by rail and truck in "Pillar-Pac" expendable bulk containers.

Flexographic printing seminar

Chairman, ALEXANDER R. BRADIE, *vice president, Mosstype Corp.*

Artwork for Pictorial Flexographic Reproduction—JAMES H. GEORGE, *Art Director, Goodren Products Corp.* Although most of us are familiar with the strong points inherent in flexography, the general feeling is that pictorial reproduction is not one of them. However, Mr. George said, flexography has certain advantages that should encourage the art director to try new applications of the basic tools he has to work with. Among these advantages are flexography's adaptability to hard-to-print surfaces and its ability to produce brilliant colors with maximum gloss. In addition, flexography is a versatile medium, so the art director can design for foil, for paper and for film.

The designer for flexography is confronted with new problems of pictorial reproduction every day. He should not attempt to simulate letterpress, lithography or gravure, but instead should plan his layout and illustrations to make full use of lithography's positive advantages.

Printing Folding Cartons by Flexography—FRANK H. LONGENECKER, *Vice President, Simplex Paper Box Corp.* Flexography is rapidly becoming an accepted medium for folding cartons. Even though this medium is in its infancy, many fine pictorial reproductions are being presented on cartons throughout the country. Not all designs now used on folding cartons can be produced by flexography, but the number is increasing daily because of the rapid progress in this process, Mr. Longenecker pointed out.

Printing from a curve and cutting on a flat surface requires a change in the carton-manufacturer's thinking. Drawings and original plates must be changed to meet the variations of the rubber plate. Your working drawing should be oversized to insure sharper reproduction. On smaller cartons, for example, the working drawing should be twice

the size of the carton. In all cases, hairline registration is to be avoided.

Flexography allows color by overprinting to give added colors on a limited number of printing stations. This process has given the smaller carton printer a means of printing short runs from a web with a smaller die and fewer plates, as well as a means for combating spiraling cost.

New Mechanical Techniques in Flexographic Printing—WILLIAM ROEHM, *Vice President, Royal Lace Paper Works.* Mr. Roehm demonstrated in a blackboard talk how halftones are successfully printed on a flexographic press, in regular production, through the application of new mechanical techniques. There are many problems inherent in flexographic presses, Mr. Roehm said, but these machines can be modified—some of them relatively simply—to eliminate many of the trouble spots. After discussing some of these methods, the speaker pointed out that although there are still hundreds of unanswered questions relative to flexographic printing, a continuing search for modifications will make today's problems tomorrow's common practices.

Printing Halftones, Screens and Bendays on Film—KARL WEIK, *President, Cello-Foil Products, Inc.* Interpreting the correct application of artwork to pressmanship in film printing for outstanding pictorial results, Mr. Weik pointed out that the steady improvements in inks, plate making and presses since the 1930s, coupled with the development of films for packaging, have brought the technique of flexographic printing to the forefront of many packagers' minds.

Mr. Weik said that certain basic factors are important to the faithful application of artwork to flexographic pressmanship. They are: (1) Design problems in flexography should be explained fully to the customer to insure that the final approved package design is one that can be reproduced by this process. (2) The packager's art department should be cautioned to use only the colors that are available on the flexographic printing press.

In conclusion, Mr. Weik pointed out that a realistic color reproduction of the product contained in the package is not and should not be the packager's chief design goal. To stand out among today's strong competition, a powerful visual symbol must be created that compels attention to your product's package.

Relation of Equipment to Print Quality—ROBERT ZUCKERMAN, *Manager, New York Office, Kidder Press Co., Inc.* Many skills must be combined in order to achieve success in pictorial reproduction of flexography. It is of the utmost importance to have top-notch artwork, the finest engravings, plates, inks and printing techniques, Mr. Zuckerman pointed out. However, all of these will not give you what you want unless your printing equipment is in good mechanical condition. On the other hand, a brand-new press of the finest quality will not insure good halftone printing unless you combine it with the proper preparatory work.

Mr. Zuckerman discussed the proper maintenance procedures for those parts of the flexographic press that have to do with the faithful reproduction of artwork for each color. These are the impression cylinder, the plate cylinder, and the upper and lower fountain rollers, as well as the gears and bearings for each roller. The plate cylinder is the area of the greatest real and potential difficulty, because it is handled every day by several departments in the pressroom. Diameters, concentricity, gears and bearings should be checked thoroughly and often.

All the painstaking effort that goes into the preparation of artwork, engravings, plates, inks and set-up will be a waste of time and money if printing equipment is in need of maintenance and repair. The best plates in the world won't make up for an out-of-round plate cylinder, a worn bushing or a gear that is loose on a plate cylinder shaft.

Flexographic Ink and the Halftone Dot—FRANK A. HAMEL, JR., *President, Del Val Ink & Color, Inc.* The three ingredients of any good printing job are creative imagination, skill and good equipment. When craftsmen of equal imagination and skill produce halftone pictorial reproductions by the letterpress, rotogravure and flexographic techniques, they usually achieve better results by the first two processes. The reason lies mainly in the design of the equipment and, specifically, in the design of the ink-distribution system, which dictates the type of ink that must be used.

In letterpress, a multi-roller ink-distribution system permits use of a pasty, high-viscosity ink. When applied to the raised dots which make up the topography of the plates, this ink does not run off and cause fill-in. Hence, good halftone work results. The rotogravure plate, which uses a doctor blade to scrape off excess ink, demands a very fluid, low-viscosity ink, Mr. Hamel pointed out.

Since the flexographic press uses a simple two-roller ink-distribution system, it also requires a fluid ink. When such a low-viscosity ink is applied to a rubber flexographic halftone plate, it has a pronounced tendency to run down the side of the dot and cause fill-in.

Flexography, therefore, has a hard row to hoe before it can become accepted as a top-notch technique for halftone reproduction. But there are several recommendations that may bring about better halftone printing via this process. First, any attempt to improve the ink-distribution system warrants the full support of the flexographic industry. Second, use of the strongest low-viscosity ink is of cardinal importance if fill-in is to be avoided.

Flexographic Printing From the Customer's Viewpoint—NORMAN A. OLSON, *Quality-Control Manager, Sears, Roebuck & Co.* Mr. Olson saluted the flexographic industry for the vital role it has played in solving the problems of printing on plastic film for packaging purposes.

Sears, Roebuck demands the utmost quality in its packaging and is convinced that flexographic printing more than satisfies demands in this area. As proof of this conviction, Sears' packaging department has greatly increased its use of flexible packages in just three years. In 1954, 110,000 lbs. of polyethylene were used as the packaging material for 117 items, at a cost of $206,000. This year, Sears is purchasing $1,580,000 worth of polyethylene as the packaging material for 560 different products.

Flexographic Questionnaire Survey Report and Analysis—MILTON I. BENNETT, *Vice President, Cellu-Craft Products Corp.*, and JOHN COZZA, *Vice President, Sales, Diaphane Corp.* The Printed Packaging Division of the Packaging Institute's Flexographic Printing Committee surveyed 496 flexographic presses in 62 printing plants. From the data obtained, a booklet has been published under the title: "Results of 1957 Questionnaire on Flexographic Equipment and Operational Data," Mr. Bennett reported.

The booklet includes survey data on roll-to-roll presses and presses operated in tandem with other equipment. Dealing with roll-to-roll presses, here are some highlights:

45% of flexographic presses are 10 years old or older, indicating a need for some press operators to think about modernizing their plants.

49% of the presses have four colors available, 5% have five colors and 6% have six colors. Considering the color combinations possible by overlaying one color on another, this indicates that the majority of flexographic presses now in operation are capable of handling almost any color problem. At the other end of the scale, 40% of flexographic presses operate with three colors or less (13% three colors, 19% two colors and 8% one color). Thus, despite the advances in flexography that are bringing the process into greater importance as a package-printing technique, a large percentage of the presses now in operation are limited as to the colors they can produce.

54% of flexographic presses require fewer than two

operating personnel per press, 39% require two operators and only 7% require more than that number.

Production-line seminar

Chairman, ROY W. ABLING, *Merck, Sharp & Dohme, Div. of Merck & Co., Inc.*

The Advantages of Package and Equipment Standardization—THOMAS M. GLYNN, *John H. Breck, Inc.* Advantages of standardization of packaging materials may be derived from two sources, Mr. Glynn pointed out. The first is the widely understood principle of complete interchangeability of components, which is the basis of mass production, and the second is the common use of the same packaging materials for different sizes of products. The latter, strictly speaking, is simplification. Both forms result in benefits to packaging-line efficiency and speed, capital investment, warehousing and purchasing.

Standardization of packages not only reduces design costs because of the fewer components, but leads to much more effective use of warehouse space and simplifies inspection of incoming packaging materials.

Simplification of packaging machines enables users to concentrate their engineering talent on better line speeds and efficiency instead of worrying about interchangeability of machines and parts, and also simplifies maintenance.

When possible, machines for a new operation should be obtained from the same source as previous equipment to insure comparable engineering performance and standardize change-over and stock parts. Such simplification—provided the correct initial selection of machine make and type has been made—will improve efficiency through better-trained operating personnel, reduced change-over time, better factory service and neater plant appearance.

When package redesign is considered, its effect on the packaging equipment should be carefully considered. The size and shape of closures, containers or labels many times can be retained to avoid the necessity of buying new packaging equipment.

Importance of Effective Scheduling and Materials Handling—JAMES T. RUTHERFORD, *Mercury Div., Ford Motor Co.* The last few years in the automobile industry have seen a huge growth in the number of options, accessories, models and colors offered. Today, any automobile company can produce cars for a full model year and not build any two precisely the same. In addition to the selectivity problem thus created, the annual change-over now involves major revisions in facilities, layout and methods.

Proper packaging of supplies, Mr. Rutherford stated, is the key to efficient mass movement of materials, which is a basic factor in modern mass production. Efficiency in both packaging and materials handling at Ford's Lincoln-Mercury Div. is characterized by pre-planning, standardization and flexibility. The program is called an "Integrated Material Handling System." The objectives of this program are to provide better utilization of plant and equipment, to assure the highest productivity of personnel, to minimize packaging, freight and receiving costs, to improve quality and to keep handling expense at a minimum.

In many companies, emphasis on production speeds and efficiencies have frequently pushed consideration of warehousing, receiving, shipping, physical handling and packaging into the background. With the high level of production efficiency that has been attained today, it is time to consider these factors for further cost savings.

In the Mercury Div., a 16-member group has charge of materials-handling planning and coordination. The responsibility of this group in new-production-facility planning is to gauge requirements for stock space, handling equipment and transportation facilities. Packaging of incoming supplies is formulated and standardized to obtain the lowest possible shipping rate, to fit the standardized handling racks and equipment in the plant and to speed application on the production line. Records of packaging methods are kept on company forms and on questionnaires filled out by the various suppliers. Review sessions are held frequently to discuss effectiveness of the program.

Price, Quality, Service—Packaging Machinery Manufacturer's Viewpoint—RICHARD WELLBROCK, *New Jersey Machine Corp.* The characteristics of the machinery-manufacturing business dictate the circumstances under which the best machine features for the least money can be furnished to the user of packaging machinery. The latter's flexibility and resourcefulness determines performance of the equipment and whether or not special or standard machinery is needed to solve production problems, Mr. Wellbrock stated.

The Packaging Institute, as a body for collecting and exchanging information, can contribute facts to the machinery manufacturers regarding customer requirements. And the machinery manufacturers can recognize from this information those customer requirements which are common and for which standard machinery could be created.

The machinery man faces three problems that exert a definite influence on equipment prices:

1. Machine design requires creative individuals who need time and facts to design a machine.
2. Communications in the manufacturing plant are mainly through drawings, an expensive way to transmit ideas.
3. Much of the manufacturing technique depends on metal working, a production form that does not lend itself to mass manufacturing in small amounts and one which involves excessive make-ready expense.

Thus, the packaging-machinery manufacturer has attempted to standardize his product to spread the costs over a larger volume and to enable the stockpiling of change-over and spare parts. When customers demand a special color of paint or special attachments on machines, this standardization is upset and the manufacturer must charge extra to cover the increased expense.

Effective utilization of present standard equipment and the solving of existing problems common to many packagers by new standard equipment will reduce the number of special machines necessary in the packaging industry.

Where special machines are unavoidable, Mr. Wellbrock pointed out, packagers can reduce the burden on the manufacturer by providing him with relatively inexpensive engineering studies that will clearly expose the problems in the particular packaging application. This minimizes the chance of inaccurate estimates on the cost of developing such special machines and insures the development of equipment that will adequately cope with all of the essential factors in any packaging problem.

Closure seminar

Chairman, GEORGE E. ROBINSON, *Merck Sharp & Dohme, Div. of Merck & Co., Inc.*

Some of the Complications Involved in Standardization of Closures for Glass Containers—J. A. BENNER, *Manager, Closure Technical Service, Armstrong Cork Co. Research & Development Center.* (Paper read by E. C. EMANUEL, *Manager, Armstrong Glass & Closure Products Research.*) Caps cannot be sufficiently universal to accommodate all closure manufacturers' theories and equipment differences, all product differences, all packaging-line variables and process conditions, and at the same time satisfy users.

There is a desire for complete interchangeability of closures so that the necessity for production-line adjustments may be minimized at the time of change-over from one supplier's closures to another. Although it is true that glass-bottle finishes have been standardized, they still involve the possible combinations of commercially accepted, differing thread shapes; varying bottle lips and sealing surfaces;

continuous, pinched or interrupted threads; sprinkler finishes, and other variables.

Closures must be formed to fit glass containers over the range of the normal commercial variations or tolerances. This places a large burden of packaging accommodation and compensation of the closures. The complexity of the glass container-closure combination is compounded by the fact that closures are formed of a variety of materials—both metal and plastic—on differing machines and equipment, and by varied manufacturing techniques. Dimensions of plastic closures also are affected by thermal and humidity storage conditions. Liners used in the closures and the packaging-line conditions in closure-users' plants also vary widely. These process and line conditions influence closure and liner material selection and can affect closure design and dimension requirements.

It has been our experience that more than 50% of closure problems are attributable to questionable mechanical or line adjustment or maintenance in users' plants. If standardization is intended to result in complete interchangeability of one manufacturer's closures with any other's, it would necessitate that all closure manufacturers agree not only on the dimensions critical to proper registry on the containers, including inside height, thread diameters, thread lengths, positioning of beginning and end of thread, but also on the standard outside dimensions—outside height, identical surface shape and outside diameter.

As long as the three E's of packaging—*economy, esthetics* and *efficiency*—are applied by manufacturers and users, we must expect differences of opinion as to what constitutes a standard closure.

Why Standardize Collapsible Tube Closures?—MARK K. DRESDEN, *President, A. H. Wirz.* (Paper read by HENRY DARLINGTON, *Plant Engineer, A. H. Wirz.*) Mr. Dresden discussed some of the more difficult aspects of standardization and tube manufacture, with particular stress on the importance of proper pitch diameter in screw-thread design.

Before the advent of plastic closures there was no problem, because the tube manufacturer also made the metal cap to fit the tube. But today, tube manufacturers are supplied with caps molded by various plastics producers. In order to bring about closure standardization, the collapsible-tube industry set up a standards committee. The committee has set up for the benefit of manufacturers a common standard for tube dimensions, thread sizes, filler-machine cups and other related details. Through the standards committee's efforts, the industry has adopted a 60-deg.-20-thread-per-in. standard. Even very slight deviations from this criterion can cause serious problems in tube and cap fit, especially when the two parts are made by different manufacturers.

Improper fit due to distortion of pitch diameter can be caused in a number of ways. Some of the most common are: interference due to incorrect number of threads per inch, interference because of incorrect thread angles (80 deg. on cap, 60 deg. on tube) and interference because of distortion of cap-thread contour.

The Forward Look in Food Closures—ROBERT C. DEWEY, *Sales Engineer, Closure Compounds, Dewey & Almy Chemical Co., Div. of W. R. Grace & Co.* Recent advances in the field of vinyl resins have been responsible for the debut of a sealing material that offers the closure manufacturer and food packer a low-cost, streamlined approach to the hermetic sealing of food in glass bottles and jars. Known as plastisols, the new plastic sealing mediums are being adopted for use on lug, screw and rolled-on closures and on bottle crowns. Like rubber sealing compounds, they are flowed in as a liquid, then dried to a tough, flexible seal.

Vinyl plastisol and organosol compounds are especially adaptable as flowed-in compounds because a wide range of viscosity is possible. Very low-viscosity materials will reflow under heat just prior to gelation, giving smooth, level gaskets. Higher-viscosity compounds can be made to stay put as applied. As there is no solvent or water carrier in a plastisol, baking or fluxing times can be reduced to less than a minute.

How do plastisol and organosol compounds stack up in respect to food-packing techniques? Moisture transmission through such films is extremely low; resistance to aqueous liquids, many oils, atmospheric conditions, pressure and vacuum is good. Films are tough, semi-elastic and pliable.

What's in store for plastic liners in the future? Economy, appearance and sealing qualities will be the areas of concentration. New resins and plasticizers are being developed daily. New techniques of manufacture and large-volume production of raw materials will be reflected in lower costs to the user. New methods of gasket application are being studied.

The improvement of oil resistance is showing considerable progress. Better adhesion to epoxy and phenolic coatings through the addition of new bonding ingredients holds considerable promise. Lower fluxing temperatures that will permit the use of plastisols in plastic closures and eliminate the problem of careful selection of colors for closure decorations is very close. There is a trend toward colored gaskets for food closures. Solid colors or blends of colors are possible and probably will be used to a much greater extent.

How big an impact will the plastic gasket have on the container industry of the future? Mr. Dewey said he believes that the acceptance of plastic gasketing will be almost as sweeping as the replacement of brown wrapping paper by flexible plastic films.

Dispensing Closures in Plastics—GEORGE E. PICKERING, *General Manager, Lamex Chemical Co., Div. of Foster Grant Co., Inc.* Mr. Pickering traced the historical development of dispensing closures in molded plastics, illustrating his talk with various packages of this type, encompassing such dispensing actions as spray, drop, flow, stream, measured volume and applicator tip. Because of its customer convenience, the dispensing closure often is merchandised more strongly than the innate qualities of the product contained in the package. Its first use is to dispense, with the closure itself an "encore."

Mr. Pickering illustrated some types of dispensing closures that have been in use for generations—such as the oil applicator and the salt shaker. Later examples, such as aerosol containers and polyethylene squeeze bottles were spawned by the familiar aerosol "bug bomb" of World War II.

Economies of the molded plastic dispensing closure have played a major role in the expansion of the market for products packaged in this type of container. This feature and the obvious advantage of customer convenience have enabled molded plastic dispensing units to take over many markets and to create entirely new ones (hair sprays, for example).

Shipping containers seminar

Chairman, JOSEPH F. HANLON, *American Cyanamid Co.*

Checklist Used in the Development of a Fibreboard Box—GEORGE GERO, *Field Engineer, Container Laboratories, Inc.* A checklist outlining the determining and construction factors to be considered when developing fibreboard boxes is a helpful tool for users and suppliers. Mr. Gero set forth five determining factors: (1) contents or product, (2) packing and closing, (3) handling packed box, (4) warehousing, (5) shipping.

Concerning *contents or product,* tell your supplier the type of unit package, its weight and size, the number and arrangement of units, and the nature of products (fragile, hygroscopic, combustible). Under *packing and closing* considerations must be included: the loading of the box, whether manual or automatic; the sealing of the box,

whether glued, stitched or taped; and the reinforcement needed, if any. *Warehousing:* Since fibreboard is subject to atmospheric conditions, the stacking, duration of warehousing, and the temperature and humidity in the warehouse are very important considerations. *Shipping:* Carrier limitations (size, weight) and hazards are important considerations. Hazards vary according to method of shipping. For example, parcel post is harder on a package than is truck delivery. The construction factors include style, size, materials, manufacturer's joint, and printing and marking. *Style* depends on carrier requirements, single- or multiple-use factors (will fibre box serve as display stand, reshipper, etc.?) and special requirements such as interior packing needs, easy-opening devices desired, etc. *Materials* chosen depend on carrier requirements, whether the container is for domestic use or export, whether coatings or laminations are desirable. *Manufacturer's joint* can be glued, stitched or taped. For example, stitching may not be desirable in some cases because it will interfere with the artwork. *Printing and marking* deal with art layout and information. In art layout, for example, the location of closure is often overlooked so that when the box is opened the artwork is destroyed. Codes, trademark, precautionary information, etc., must be printed on the shipping container as often and as large as needed for adequate identification in warehouse, on display, etc.

The user's receiving requirements are important considerations that are often overlooked. Unless otherwise specified, the supplier will deliver in units of 25 or 50 boxes, whereas for production reasons the user may find 30 boxes per unit the most desirable. The size, weight and quantity per pack may also be significant considerations for the user, as well as whether he receives the shippers bundled, boxed or unitized.

A Survey of Non-Skid Treatments for Fibreboard Boxes—JEROME J. KIPNEES, *General Supervisor, Container Laboratories, Inc.* The sliding of boxes during shipping is becoming increasingly a problem, Mr. Kipnees pointed out, because of higher and higher stacking, and faster and faster speeds of production flow. Appearance requirements call for smoother printing surfaces, and gloss inks, in many cases, also contribute to the tendency to slide. Specific plant and product conditions may also cause sliding. For example, a baby-powder factory has a particular problem because a fine mist of powder settled on the shippers, causing them to slide excessively in transit. One method of preventing sliding includes dimpling, pimpling, indenting and embossing, all of which tend to make the surface rough. Disadvantages of this method include: slower production due to added processing, more glue is needed to make uneven surfaces adhere and gloss inks cannot be used to advantage.

Non-skid coatings applied at the corrugator also discourage sliding, often to a marked degree. Advantages of this method: no reduction in production speed; drying is fast because coating is applied to hot board; seals are good. Disadvantage is that this method is not effective if gloss inks are used.

Spray application at the printing press takes place after printing. Therefore, best protection is afforded with this method, since slippery gloss inks do not undo the non-skid quality of the coating; spray method covers surface more uniformly and completely. Disadvantages are that spraying is messy and more maintenance is required, seal may be adversely affected and spray technique may be a health hazard to employees.

Non-skid inks are another means of controlling sliding. This involves an additive to the ink. This method is often efficient and is not messy; but it requires at least a three-color press and the additive may adversely affect the color.

However, box users may find it most efficient to apply the coating themselves, rather than having the supplier do the coating. Advantage of this is that the user can be selective, coating the boxes only as they are shipping and as use requirements dictate. In fact, the responsibility for non-skid treatments may very well belong to the box user.

Single Facing the Future—FRANK P. COONS, *Packaging Engineer, Johnson & Johnson.* Single-face corrugated is made of two sheets of paper—one flat and the other corrugated or fluted. These are joined together with adhesives under heat and pressure on a piece of equipment called a combiner. It has been used in roll form since the early days of packaging for cushion wrapping of fragile items.

A great deal of work is being done with single-face corrugated in the field of protective packaging. More than a dozen corporations have been experimenting for many months with various types of unit packages and shipping containers. These include a bellows-fold-style carton for sealed-beam headlights, five-panel folders for automotive parts, die-cut mailers for small items, and regular slotted and special slotted boxes for a variety of food products. They will replace paper bags, bundle wraps or similar containers in single-wall corrugated.

A Mechanical Device for Determining Fibreboard Box Dimensions—C. RAY IRONS, *Socony Mobil Oil Co.* Despite constant research and development in all allied fields, the basic procedure for determining the interior dimensions of a fibreboard box is still a matter of controversy, Mr. Irons pointed out. To realize the need for an accurate and consistent method, consider the petroleum industry, where containers go directly to the can supplier and are filled with empty cans before they are sent to filling point. In this instance it is quite important that close tolerances be maintained in the size of the shipping case. If incorrectly sized cases are supplied, it is of real importance that there is established a commonly accepted method by which size can be determined. A new device for measuring the interior dimensions of fibreboard shipping cases was demonstrated. This device was designed by T. J. Gross, technical advisor for Union Bag-Camp Paper Co.

The Score-to-Score Technique for Determining Fibreboard Box Dimensions—CHARLES J. ZUSI, *Packaging Consultant.* The score-to-score technique of measuring corrugated and solid fibreboard boxes attempts to apply to the finished box the method used by the manufacturer when he writes his manufacturing specifications, Mr. Zusi stated.

The settings of the scoring wheels on the machines are specified at distances apart which will give the box, when set up, the free inside dimensions desired by the customer, that is, the user of the box. It sounds reasonable, but it actually is so only when the exact manufacturing specifications used by the manufacturer are taken as the basis. A serious difficulty arises because the allowance made for the scores vary from machine to machine and from one kind of board to another.

How to Measure a Fibreboard Box—ROLAND K. FRASER, *Manager, Product Development, Nashua Corp.* Who measures a box, why it is necessary and what kind of a box must be measured are some of the factors involved in trying to determine a best method of measurement, said Mr. Fraser. Increasing use of automatic equipment for opening, filling and closing shippers demands more accurate and uniform specifications. The Packaging Institute committee expects to reach a point in evaluation of different methods and conditions of use so as to be able to recommend one standard method of measurement. At the present time it can only point out certain areas where any given method is advantageous.

A demonstration of what the committee believes is a new method of box measurement utilized a wood frame with three moving rulers built into the frame for direct reading of interior dimensions. Limited testing indicates it is capable of attaining plus or minus 1/64-in. accuracy and apparently can usually be counted on for 1/32-in. accuracy.

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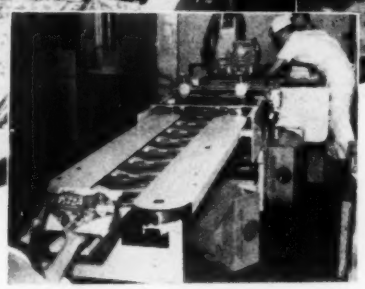

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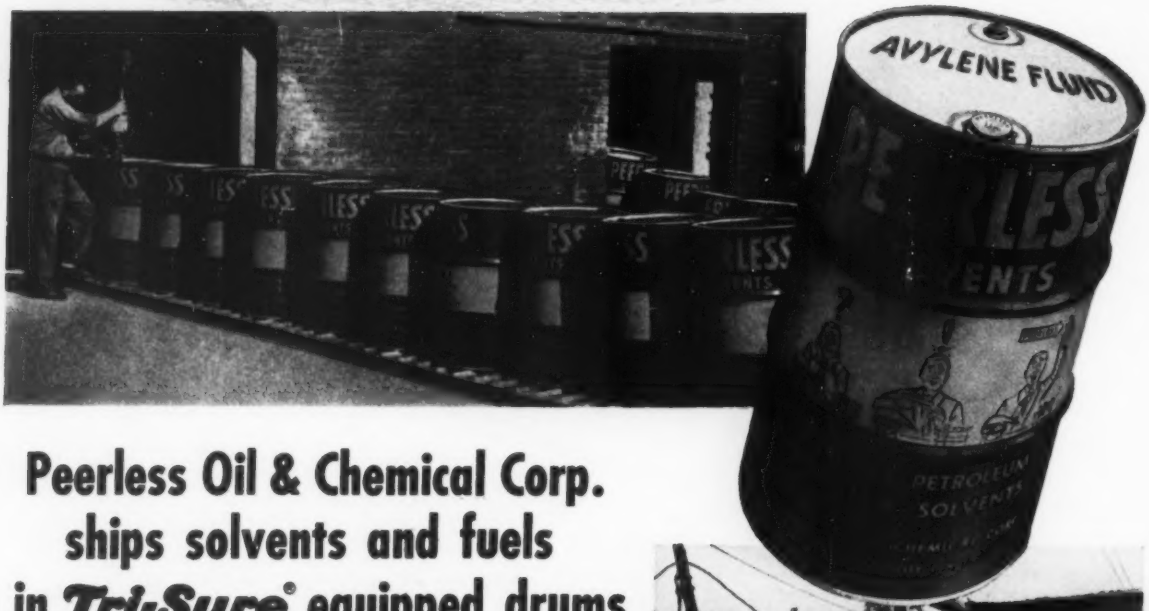

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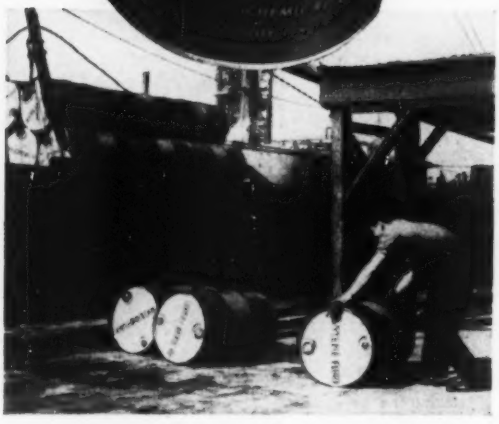

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Methods
Engineering
Testing

Pressurized foods

An examination of the problems and the promise of aerosol-type food packages, based on recent successful work with compressed-gas propellents

*By Robert C. Webster**

Pressure, or aerosol, packaging has gained conspicuous popularity in non-food items since World War II and the list of available aerosol products now ranges from insecticides and cosmetics to polishes and window cleaners. Annual production of these items is expected to reach an estimated 380,000,000 units this year.

In the face of this rapid rise, growth in pressurized foods other than whipped cream has up to now been practically at a standstill. This lag can be attributed to three problems:

1. Lack of approval for propellents other than compressed gases.

2. Reluctance of the American consumer to accept foods in the aerated state when the product has previously been marketed in non-aerated form.

3. Lack of dispensing methods other than foam that offer good removal of product and consistent spray or stream patterns.

Recent research has provided answers to these problems for many products and a method for non-aerated spray and stream dispensing is now available that not only satisfies consumer demands, but also makes efficient use of the compressed gases that were formerly thought to be useless.

These developments have been motivated along the lines of product reformulation, development of new valves and actuators and new gas relationships. Each of these points, by itself, is of considerable importance in successful packaging and dispensing of a food product.

Foam-type aerosols, of course, have their place in the pressure-packaging picture, but they are limited to those products that the consumer will accept in aerated form. The first aerosol food product on the market was an aerated whipping cream, introduced in 1949, that sold 30,000,000 units in a year and has since grown to an estimated output, along with other whipped toppings, of 75,000,000 cans this year. Compressed-gas propellent is used in all of these.

Until recently, whipped toppings were the only successful food aerosols. In 1956 a pressurized soft-drink syrup (Figure 1) had a limited success. This year a spray-type barbecue sauce—the first food product to employ the principle of wet-spray, or non-aerated dispensing (Figure 3)—has opened a whole new field of possibilities.[1] Other food products that show immediate promise of success by the same system are listed in Table I.

The potential for food aerosols employing other than foam-type valves is enormous. One industry authority (1)[2] has predicted that this "could be the biggest thing ever to hit the aerosol industry. More volume could exist in one product type in the food field than in dozens of currently available [non-food aerosols]." One of the major can companies, in a private survey, has estimated the potential for pressurized foods at 750,000,000 units per year.

Product factors

The treatment that a food product must receive prior to actual packaging in a pressurized container

* General manager, Food Div., Western Filling Corp., Los Angeles.

[1] See "Breakthrough in Food Aerosols?" Modern Packaging, Nov., 1957, p. 116.

[2] Numbers in parentheses identify References appended.

Figure 1. Among the first of the pressurized foods, other than whipped topping, was this soft-drink syrup, which used an aerated stream.

is dependent upon two factors: namely, dispensing characteristics and product characteristics.

A product to be dispensed in a spray requires treatment different from that of a product to be dispensed as a foam or a non-aerated stream. The basic product characteristics governing the success or failure of a product in a pressurized container are: (1) viscosity, (2) particle size, (3) color and (4) flavor.

By a proper combination of the above four factors, it is theoretically possible to attain the desired dispensing characteristics. If a product is of very minute particle size, but extremely viscous, then it is unlikely that satisfactory dispensing will be achieved.

The limit of particle size is the diameter of the smallest orifice in the valve or actuator. The particle-size limitations for each valve system must be determined in the laboratory.

Reduction of product particle size by mechanical means can alter the physical structure of certain products to a point where product separation can occur. The settling out of product constituents must be avoided if complete freedom from even partial clogging is to be assured. Close control on product color as well as flavor must be maintained. Many flavors are incorporated or associated with the fibrous or pulpy material of the product. As the fibrous or pulpy matter is reduced and/or removed, alterations in the product flavor usually occur.

Viscosity is another matter. Many food products would have excellent application to the pressurized package except that, as formulated, their high viscosity precludes normal flow through the valve and/or actuator. Products such as cake frosting, marshmallow topping, peanut butter and food spreads are impossible to dispense without reformulation. Table II shows viscosities of representative foods on the Brookfield Viscosimeter.

If reformulation results in a product markedly different in consistency or appearance from that familiar to the consumer, then the product loses appeal.

Product color and flavor are obviously significant factors in the ultimate success of pressurized foods. Catsup, for example, when dispensed from an aerating pressurized container, undergoes a loss in color to a pale pink hue, which makes it undesirable. Unless they can be dispensed in non-aerated streams, many foods have little application at this time to the pressurized package.

Valves

One of the problems first recognized in the development of pressurized foods was the acute need for valves designed specifically for use with food products. The numerous valves employed in the non-food field were found to lack certain necessary characteristics.

In the typical non-food aerosol valve (3, 4), the spray characteristics, particle size and delivery rate are determined by product formulation and the physical and mechanical construction of the valve mechanism. For these products the valve mechanism must provide a minimum of one expansion chamber, with an entry and outlet orifice. As the active product plus the liquified propellent flow into this chamber there is a resultant pressure drop. This

Table I: Existing and potential pressurized foods

*Barbecue sauces[1,2,3]	Mustard[2,3]
Cake frostings[3]	Salad dressings[1,2,3]
Chocolate syrups[2]	Salad oils[1,2,3]
Flavoring and coloring agents[1,2]	Shortenings[3]
Fruit syrups[2]	Soy sauce[1,3]
Honey[2]	Table syrups[2]
Ice-cream mix[3]	*Toppings[3]
Marshmallow topping[2,3]	*Whipped creams[3]

*Represent existing pressurized foods.
[1]Product can be dispensed as a spray.
[2]Product can be dispensed as a non-aerated stream.*
[3]Product can be dispensed as a foam.

pressure drop is significant enough to cause a rapid expansion of the gas within the chamber. Further expansion of the product plus propellent is achieved in the removable button or actuator.

In a product packed under compressed gas, on the other hand, it appears that the valve serves the primary purpose of guiding the product, plus propellent, to the actuator, where the break-up of product must be accomplished by mechanical means. Due to the nature of the compressed-gas propellent, the valve-expansion chamber and orifices serve only the effect of insignificant expansion of product plus guidance of the product to the actuator. As the product plus propellent enter the expansion chamber of the valve, there is only a very small pressure drop. This drop in pressure is not sufficient to markedly expand the product and only serves to increase the turbulence of the product flow.

As the product enters the conventional aerosol actuator, the expansion rate of the gas alone is not sufficient to break up the product. Thus the product is emitted in a high-velocity stream.

First efforts to correct this condition were based on the following two premises:

1. Product flow to the actuator must be as rapid and unrestricted as possible. Turbulence of flow appears to be a necessary adjunct. The rapid turbulent flow of product plus mechanical break-up in the actuator yield a satisfactory spray.

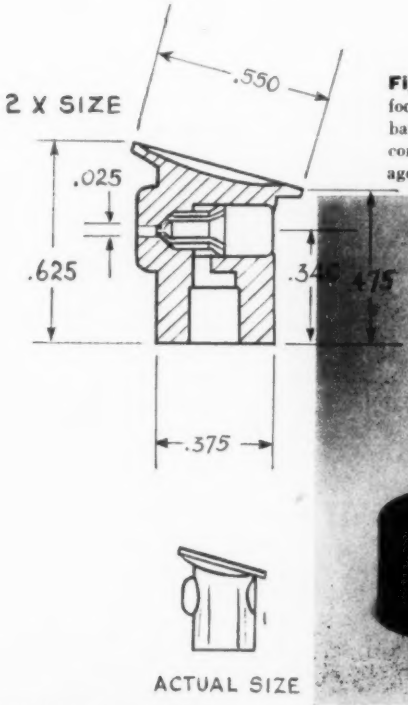
Table II: Comparative viscosities of several food products (at 70 deg. F.)

Product	*Viscosity in cps.*
Salad dressing, regular	15,200
Salad dressing, "A" aerosol	480
Salad dressing, "B" aerosol	290
Meat tenderizer	8.0
Liquid smoke	14.0
Mustard	24,800
Barbecue sauce, tomato base	1,200
Barbecue sauce, oil base	4,205
Chocolate syrup	830
Marshmallow topping	58,000
Waffle syrup, 65° Brix	200
Syrup, 75° Brix	4,100

2. Currently existing actuators must be redesigned to be compatible with particle size, as well as to provide mechanical systems to break the product into a spray.

Actuators commonly employed in the aerosol field were limited, for the most part, by small orifice size and structure.

Calmar, Inc., in cooperation with the Western Filling Corp., designed an actuator which effectively combined the factors of orifice size and mechanical break-up. (See Figure 2.) Further efforts are currently under way to develop valves and actuators for specific food products. For example, other than



Figures 2 and 3. First successful pressure spray head for a non-aerated food product (drawing, Figure 2), used on the recently introduced Sizl-Spray barbecue sauce, is this "O"-head design. This type actuator will effectively and continuously break up oil-base products. Components of Sizl-Spray package, showing the unusual dip tube and actuator head, are illustrated in Figure 3.

DRAWING COURTESY CALMAR, INC.

the Calmar actuator, no currently available actuator will effectively and continuously break up oil-base products, such as salad oils.

Further work has also been devoted to development of actuators for streams or ribbons of product. These basic considerations are being observed:

1. The actuator must have uninterrupted delivery and be actuated by only fingertip pressure.
2. The actuator must allow easy delivery of the contents to the object to which they are being applied.
3. The spout or orifice must be drip-proof.
4. The design should be functional and modern, thus creating an atmosphere that does not lead to mental association of the product with non-food aerosols.

The efforts of Calmar Co. and the Western Filling Corp. have recently led to the development of a new actuator (Figure 4) which appears to possess all the above-mentioned attributes.

With the unlimited cooperation being given by the valve suppliers to this project, many new and fascinating developments in the field of valves for both food and non-food products are to be expected.

Propellent

The basic requirements of the propellent or driving force for pressurized foods are:

1. The gas must be non-toxic.
2. The gas must be inert.
3. The gas must be of low cost.
4. The gas must not cause deleterious product changes.

As mentioned earlier, one of the primary retardants to development in the food aerosol field has been the question of propellents. The majority have contended that without the use of liquified propellents, the developments in this field would be limited.

The *liquified propellent* develops its driving or propelling force from expansion or vaporization. The expansion ratio can be defined as the ratio of the final volume of vaporized propellent at atmospheric pressure to the initial volume it occupied under pressure in the container.

The nearly constant pressure during use provided by the liquified propellent offers many advantages when compared with compressed gases. The liquified propellents have a much greater expansion ratio. For example, Freon 12 increases in volume nearly 310 times in expanding from a liquid to a gas at atmospheric pressure (5). With a similar pressure change, the compressed gases have an expansion ratio of only from three to 10 volumes.

The liquified propellents have not as yet been given toxicity clearance for use with food products. The major suppliers of the liquified gases have extensive toxicity tests under way to prove their compatability with foods. It is predicted by these suppliers that clearance for use with foods will be granted within a period of one to two years. Nevertheless, as long as any question of toxicity exists, research in propellents for foods naturally will center on compressed gases.

The *compressed-gas propellent* derives its propelling force by a limited expansion of gas dissolved in the product and gas in the headspace of the container. Since all that is involved in a package under compressed gas is expansion of gas between two pressures, there is a marked drop in pressure during the service life of the package.

In filling, as the compressed gas is forced into the container through the valve, a certain percentage of the gas is dissolved in the product until equilibrium is reached between the pressure of the gas dissolved and pressure of the gas in the headspace. When the valve is actuated, a certain proportion of product plus dissolved propellent are ejected from the container by the force of the headspace pressure.

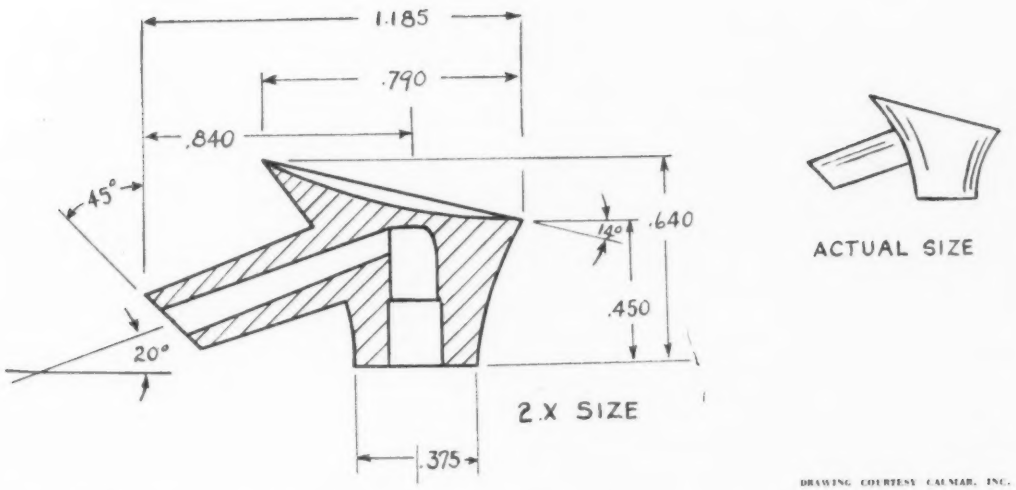
As headspace expands there is a decrease in headspace gas pressure. To maintain the state of equilibrium in the container, there is then an expansion of the gas dissolved in the product. This condition of decreasing pressures continues until the contents are expended.

Many factors determine the success or failure of

Table III: Solubility of various compressed gases in several food products at 77 deg. F.*

Aerosol can	*Corn oil*				*75° Brix sugar sol'n*			*Water*	
pressure (PSIA)	*N20*	*CO2*	*N2*	*AR*	*N20*	*CO2*	*N2*	*N20*	*CO2*
14.7	0	0	0	0	0.0	0.0	0.0	0.0	0.0
25.0	1.3	1.3	0.04	0.11	0.01	0.01	0.01	0.42	0.57
50.0	4.6	4.3	0.14	0.36	0.02	0.05	0.02	1.40	2.00
75.0	7.9	7.4	0.25	0.62	0.04	0.08	0.04	2.50	3.40
100.0	11.2	10.4	0.35	0.87	0.06	0.11	0.06	3.50	4.70
125.0	14.5	13.5	0.45	1.13	0.08	0.15	0.08	4.50	6.20

*Values are given in terms of volume of gas expelled upon reducing pressure from P lbs. to 1 atmos. ml. gas/ml. of substrate at 77 deg F.
Source: Air Reduction Co., Inc., Research & Engineering Dept., Murray Hill, N.J.



DRAWING COURTESY CALMAR, INC.

Figure 4. New "FI"-head actuator, designed to deliver an uninterrupted non-aerated stream or ribbon of product.

a compressed gas as the propelling force in a package of pressurized food. Among these are:

1. Solubility
   (a) Temperature
   (b) Product formulation
2. Charging pressure
3. Shaking cycles
4. Effect of the gas on the physical and chemical stability of the product.

The compressed gases that have been given toxicity clearance for use with foods are nitrous oxide, carbon dioxide, nitrogen and argon. Each of these is non-toxic and inert, but the gases vary greatly in solubility. Nitrogen and argon are much less soluble in most food products than are carbon dioxide and nitrous oxide. Solubilities of these four gases with several food products are shown in Table III.

To avoid aeration, it is desirable to have low solubility of the propellent in a product. In dispensing chocolate syrup, a normal-colored non-aerated stream is the most logical dispensing form. To achieve this, as little gas as possible must be dissolved in the product. Yet there still must be sufficient compressed propellent to force the product from the container.

The temperature of gassing has a noticeable effect on the solubility of compressed gases. It is common knowledge that the greatest absorption of carbon dioxide in water is achieved at low temperatures. This principle is used every day in the carbonated-beverage field. The solubility of several compressed gases in water and oil at varying temperatures are shown in Tables IV and V.

The use of low temperatures for the loading of pressurized whipped creams has been familiar for several years. Due to the fact that many of the foods that will be pressure packaged will be filled at elevated temperatures or at room temperatures, it is felt that loading of the propellent at room temperature is more economically feasible. Another factor in favor of loading at room temperatures is the greatly increased viscosity of many products at refrigerated temperatures.

The charging pressure, or pressure in PSIG[3] at which the propellent is introduced to the container, is subject to many variables. Among these are solubility, viscosity of the product, temperature and the dispensing characteristics desired.

The charging pressure will of course depend upon the solubility of the gas in the product. The charging pressure is also dependent upon the pressure limits of the container. The Interstate Commerce Commission in its Freight Tariff No. 11 prescribes the following pressure limits for pressurized foods and like products:

Foodstuffs or soaps may be packed in metal cans with soluble or emulsified compressed gases, provided the pressure in the container does not exceed 115 PSIA at 70 deg. F. or 150 PSIA at 130 deg. F. The metal container must be capable of withstanding, without bursting, a pressure of two times the pressure of the contents at 70 deg. F. or one and one-half times the pressure of the contents at 130 deg. F., whichever is greater.

Extremely close quality control in the loading of compressed-gas propellents is a vital factor. The

[3]PSIG = lbs./in. gauge. PSIA = sq. in. absolute.

Table IV: Solubility of gases in water at various temperatures

Temperature (°F.)		*Weight of gas in grams dissolved in 100 gms. of water at a total pressure of 760 mm.*	
		Carbon dioxide	*Nitrogen*
0	(32°F.)	0.3346	0.002942
10°	(50°F.)	0.2318	0.002312
20°	(68°F.)	0.1688	0.001901
30°	(86°F.)	0.1257	0.001624
40°	(104°F.)	0.0973	0.001391
50	(122°F.)	0.0761	0.001216
60	(140°F.)	0.0576	0.001052
70	(158°F.)	—	0.000851
80	(176°F.)	—	0.000660
90	(194°F.)	—	0.000380
100	(212°F.)	—	0.000000

Source: Handbook of Chemistry, N. A. Lange, Handbook Publishers, Inc., Sandusky, Ohio, Eight Edition, 1952 (61).

Table V: Solubility of several compressed gases in corn oil at various temperatures

Aerosol can pressure (PSIA)	*Volume of gas expelled upon reducing pressure from P lbs. to 1 atmos. m. gas/ml. at T°F.*		
	32°F.	*77°F.*	*140°F.*
Nitrous oxide			
14.7 (atmospheric)	0	0	0
25.0	2.3	1.3	0.70
50.0	7.7	4.6	2.4
75.0	13.1	7.9	4.1
100.0	18.6	11.2	5.8
125.0	24.0	14.5	7.5
Carbon dioxide			
14.7	0	0	0
25.0	2.2	1.3	0.64
50.0	7.5	4.3	2.2
75.0	12.8	7.4	3.8
100.0	18.1	10.4	5.4
125.0	23.4	13.5	7.0

Source: Air Reduction Co., Inc., Research & Engineering Dept., Murray Hill, N. J.

allowable compressed propellents have an operating pressure in excess of 750 PSIG. The amount, in grams, of these gases incorporated into the pressurized container is very small. An error of 1% in charging with the propellent would give a significant deviation factor. Any significant error in loading could leave the container partially inoperable and result in higher-than-normal percentages of product retained in the container after all the gas has been expelled. This is particularly true in the case of nitrogen or argon, since smaller percentages of these gases are actually incorporated in the container.

It is virtually impossible to recommend a rule of thumb for gas, charging pressure and shaking cycle. The final selection of propellent must be based upon basic product and dispensing characteristics. Where a spray is desired, it would probably be advantageous to use a gas of higher solubility, such as nitrous oxide. When a non-aerated stream is desired, the use of a gas with low solubility characteristics would be advantageous in reducing foaming of product.

There is a very great need for further research in the use and applications of compressed propellents. New dispensing characteristics with certain products appear possible through the mixture of gases.

Bacteriological shelf life

The sterilization procedures required to insure satisfactory bacteriological shelf life are dependent upon the nature of the product. Most foods that have application to pressure packaging will require some sort of preservation treatment. The natural acidity of the product to some degree dictates the treatment the product must undergo. On the basis of product acidity, and the susceptibility of the product to spoilage, the treatment may be divided into three basic classes:

1. Pressurized foods requiring heat treatment.
2. Pressurized foods requiring storage at temperatures of 40 deg. F.
3. Pressurized foods requiring no specialized treatment.

In a wide range of products that have a pH of 4.5 or less, heat treatment is required to prevent bacterial spoilage. In the spoilage of acid products, a miscellaneous group of organisms is involved which includes acid-forming bacteria, yeasts and molds. These spoilage agents are of relatively low heat resistance and it has been found that exposure to a temperature of 190 deg. F. or higher is sufficient to insure adequate sterilization. This is assuming that the raw product does not have an abnormally high bacterial load.

In the pressurized food field, those products that have a pH of 4.5 or greater are usually preserved by refrigeration. The use of refrigerated temperature does not insure sterile conditions, but retards the growth of spoilage organisms. Many foods that are pressure packaged cannot be subjected to heat without quality loss and thus must be refrigerated. Refrigerated products such as whipped creams and toppings have a relatively short shelf life in comparison with products sterilized by heat. With any variation in storage temperature these products become subject to spoilage.

It is possible in non-acid products, such as pressurized whipped cream, to achieve longer-than-normal shelf life by [*Continued on page 206*]

A look into your packaging future

Olin Cellophane Packaging Speeds Selling

John B. Penson, package designer, says: "We found that the more shoppers see of a product, the more and faster they buy. Because cellophane is the only transparent packaging material that meets the requirements of both high-speed production and high-speed product selling, today's improved cellophanes are a major new sales force.

"In addition to speeding buyers' recognition and interest in the product, cellophane gives an improved appearance and a feeling of quality. Self-service merchandising techniques increasingly require these aids to faster selling. Today, manufacturers in every field are re-examining the numerous advantages of transparent, sales-winning cellophane."

John B. Penson's comments are a reminder of the importance of re-evaluating your packaging in the light of changing merchandising techniques. An Olin Film packaging consultant has experience and information which can help you or your designer. Call Film Division, Olin Mathieson Chemical Corporation, 655 Madison Avenue, New York 21, N.Y.

Olin CELLOPHANE®
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A Packaging Decision Can Change the Course of a Business

Q Questions & A Answers

This consultation service on packaging subjects is at your command. Simply address your questions to Technical Editor, Modern Packaging, 575 Madison Ave., New York 22, N. Y. Your name or other identification will not appear with any published answer.

Paperboard interleafing

Q: *How can we improve the strength and reduce the distortion of paperboard which is used to interleave portions of a damp product? We are now using a square piece of waxed, bleached kraft board to separate portions of a shaped and damp molding clay. The waxed board becomes soft in a few days and wrinkles badly along the edges.*

A: The inclusion of paperboard between layers of a damp product for long periods will result in softening of the board regardless of waxing or similar coating. The paperboard can be a high-wet-strength type, which will retain some of its strength even if saturated with moisture, but this wet-strength board will also show some softening and distortion.

You should try samples of paperboard that have been built up from two plies using a laminating agent of a resin such as polystyrene. This resin will add stiffness to the paper and will give a maximum of dimensional stability which will reduce edge wrinkling. The polystyrene will not be affected by the product's high moisture content and the resulting board can be lightly surface waxed to prevent the paper from adhering to the product. It is also colorless, non-bleeding and heat stable for normal temperatures. You should also consider a similar laminated paperboard with polyethylene resin used as the laminating agent. This resin will give dimensional stability and other desirable properties, but the board will not be so stiff as that made with the polystyrene resin.

Heat-sealed vs. folded bags

Q: *We are interested in the relative merits of heat sealing in comparison with folding for the closure of bags in folding cartons. Our product is a granular material requiring some moistureproofness and we are interested in modernizing and improving our packages. Will you advise us on this question?*

A: A carton liner or a bag in a carton can be satisfactorily closed by either heat sealing or certain types of folds to give good protection and siftproofness for the product you describe. If the liner materials or bags you are using are capable of heat sealing, this operation can be performed satisfactorily with a heat-sealing unit on your production line to close the bag or carton liner. If for economy or any other reason you prefer to use a material which is not heat sealable, you can also obtain an effective closure by making a double fold if you make sure that this fold is held down by the carton flaps. The important factor is to use enough extra bag length so that a complete double fold is possible with sufficient bulk so that it is under firm compression when the carton flaps are sealed. The combination of a well-formed double fold and sufficient compression to hold the folds in position will prevent water vapor from entering and will also prevent sifting. If your product requires protection such as gastightness, complete greaseproofness or extremely low levels of water-vapor permeability, then the heat-sealing closure would be preferable. Your product does not appear to have these requirements, so there will be no real difference between a heat-sealed closure and a good double fold.

Problem of carton staining

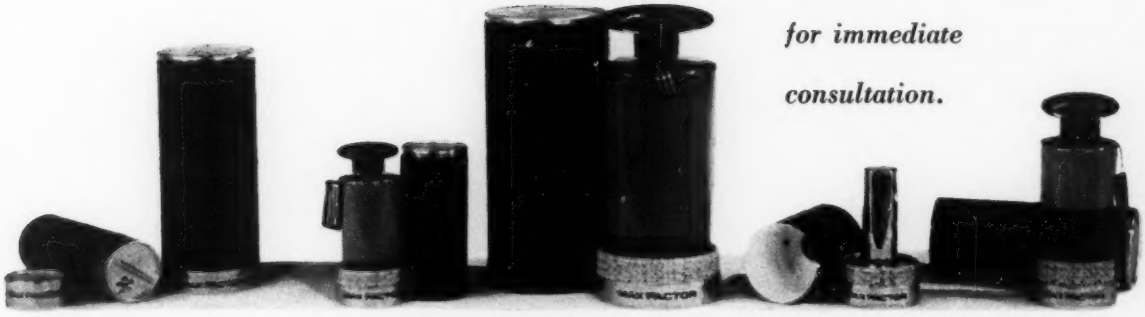
Q. *One of our products is a starter-pilot capsule which is a drawn and sealed aluminum tube. This capsule is displayed for sale in a folding paperboard carton in which 12 units are positioned in rows in die-cut openings of the carton. An occasional capsule will leak slightly around the top closure after several months of display. This leakage of the solvent-type product stains the top area of the carton and the result is an unattractive sales display. Can you give us any suggestions on redesigning the display carton, using a plastic or any other material that will not stain under these conditions?*

A. Your present carton appears to be an economical and satisfactory means of shipping and displaying these starter capsules in all respects except for its staining by occasional product leakage.

A metal, plastic or composite display unit could be developed that would not be stained by your solvent-type product. However, you must determine by tests if the metal finish or the plastic constructions under consideration could be attacked or otherwise affected by the solvent action of your product and also whether contact of the product and its residual deposits on the proposed display would be obvious and unattractive. Your tests with metal, plastics and other combinations of materials certainly could produce a satisfactory display unit. However, the cost of such a display would be greater than that of your present folding carton.

It is suggested that you first try to minimize the unattractive appearance of the present carton due to staining by printing a dark, solid color area or a design pattern on the areas of the paperboard box that might be contacted by the product from a leaking capsule. Your tests could develop an ink formulation, color and printed pattern that would allow the product to stain the paperboard without resulting in an unattractive appearance. This technique has been used successfully in the packaging of certain oily products that have marginal requirements for greaseproofness. Using such a technique, your present folding carton would be satisfactory with no noticeable increase in cost.

Recognizing the importance of first impressions— Max Factor and Company chose the prestige of Niemand Bros. tubular packages. Our packaging engineers are available for immediate consultation.



distinctive products demand distinctive packaging

Niemand Bros., Inc.
manufacturers of
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paper products
37-01 35th Ave.
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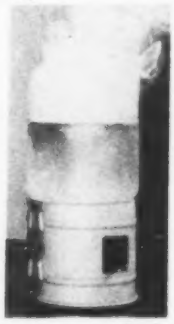
New York

NB

Equipment and materials

Water-soluble resin

Union Carbide has developed an unusual class of water-soluble resins that appears to have broad application in the packaging of various products. Trademarked Polyox, these resins are high-molecular-weight polymers of ethylene oxide that can be cast, calendered or extruded into a tough, flexible film. The film dissolves in four seconds after submersion in water, which suggests its use as a completely disposable packaging material for pre-measured amounts of products to be dissolved or dispersed in water, such as detergent powders, agricultural chemicals, inks and paints. In the accompanying photo, an unopened package compounded of this resin, containing a chemical that produces a harmless gas on contact with water, has been dropped into a jar of water. The gas cloud issuing from the jar illustrates the resin's property of water solubility. The resins have great thickening power, low moisture pick-up in dry form, are compatible with other types of polymers and are resistant to biological attack, oils and greases, the company says. Commercial production of the resins is scheduled to begin early next year. *Union Carbide Corp., Union Carbide Chemicals Co. Div., 30 E. 42 St., New York 17.*



Removable spout

A polyethylene pouring spout for drums and pails that can be inserted without tools and removed for later re-use is available from Angier Adhesives. The spout's odorless, tasteless and non-toxic properties permit its use in pouring many viscous and non-viscous fluids, the company says. *Interchemical Corp., Angier Adhesives Div., 120 Potter St., Combridge 42, Mass.*

Portable casing-closure unit

A portable machine for securing any type of closure on casings or flexible bags has been introduced by Tipper Tie.

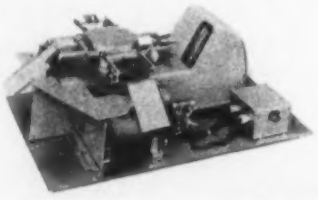
The pneumatic-powered unit weighs 12 lbs. and is constructed of stainless steel, chrome plate and aluminum. The machine puts first and second ties on sausages or similarly filled casings and puts second ties on filled bags of poultry or meat, with or without a vacuum. Closures are pre-formed aluminum, shaped to prevent any injury to casings. Mounting holes and suction caps are provided for anchoring the machine to the work table. With only four moving parts, the machine is easy to clean and requires no adjustment for different sizes of casing, the company says. *Tipper Tie, Inc., 2165 Morris Ave., Union, N.J.*

Coatings for polyethylene

Two protective and decorative external coatings for polyethylene containers are available from Bradley Container. A varnish coating, called "Hi-Gloss," is said to impart a high sheen to polyethylene bottles and to provide a tough, durable finish that prevents scratches and scuffing during handling. "Barrier Gloss," the second coating, reportedly gives natural polyethylene a glass-like clarity and reduces permeation and transmission of oxygen through container walls. Screening agents can be added to both coatings during fabrication. *American Can Co., Bradley Container Corp. Sub., Maynard, Mass.*

Precision checkweighing

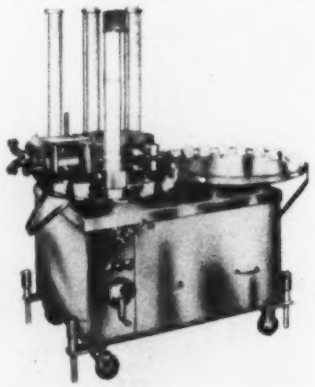
A new line of Selectrol automatic checkweighing machines reportedly provides weight accuracies in the range of one part in 5,000 up to one part in 20,000. The machines are available in capacities from one gram to 100 lbs. Automatic transfer mechanisms place the product



to be weighed on the weighing element with a minimum of impact, the company says. The Model 144, shown here, employs a rotary transfer mechanism with one loading station, one weighing station and two discharge stations. The scale weighing element guarantees accurate weight by the use of counterweights on the scale-weight platter. A visual weight-reading dial with a frictionless, optical light-indicating system is provided, as is a control system that consists of direct-reading crystal photocells on adjustable mountings alongside the optional-reading scale dial. Scale speed is adjustable with a simplified hydraulic damper. Scale dial and beams are available in avoirdupois or metric, and may be graduated in grains, grams, ounces or pounds. A top-hinged housing provides easy access to the photocell adjustments, counterweights and damper to permit rapid change-over from one product to another, the company says. *The Exact Weight Scale Co., 538 E. Town St., Columbus, Ohio.*

Cup filler and capper

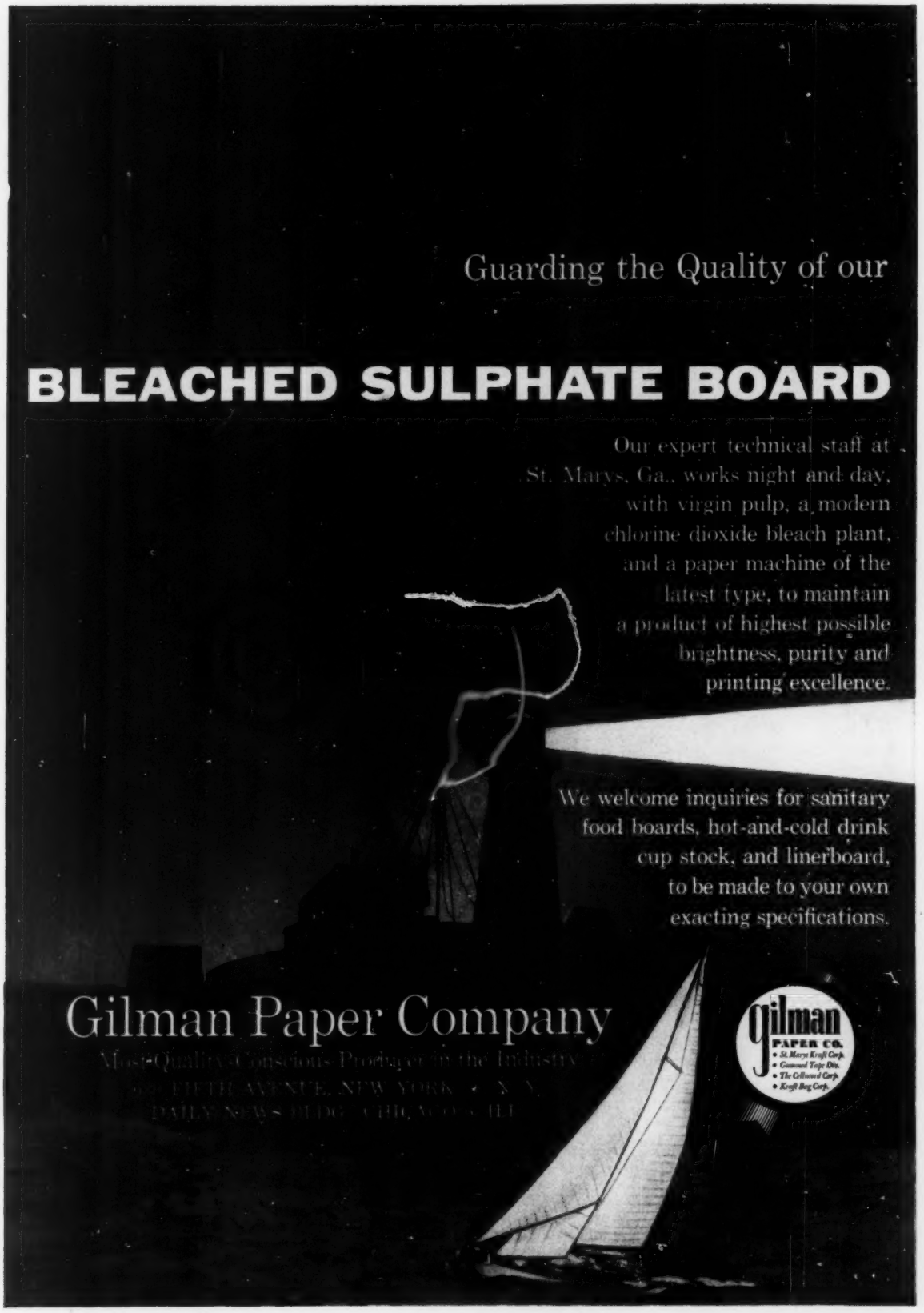
Anderson's new Model 331 high-speed cup filler and capper is designed for the production of various food products in 3- to 16-oz. nesting-type cups at speeds up to 250 cups per minute. Spe-



cial interchangeable attachments are available to enable the machine to handle other types of cups. A screw-type stripping action dispenses three cups simultaneously onto the machine's rotary filling table, where a four-orifice filling nozzle rotates with the cups as they circle through the capping station and onto the accumulator table. At the triple-action capping station, the lid is dispensed onto the cup, after which one cap tamper positions the closure lightly, permitting trapped air to escape, and a second cap tamper seats the lid firmly. *Anderson Bros. Mfg. Co., 1907 Kishwaukee St., Rockford, Ill.*

Sterilizable plastic

A method of synthesizing olefins that produces regularity of structure and controlled crystallinity is being used in the production of Moplen, a highly-resistant thermoplastic, by Montecatini at its Italian plant. Made from propylene gas by a low-pressure catalytic, the colorable plastic reportedly is resistant to temperatures of over 300 deg. F. as well as to grease and oil, water and many acids. It also has high impact strength and electrical properties. Already in commercial use in Italy, it will be introduced to the American market next year. The manufacturer suggests the use of the plastic for sterilizable opaque to translucent household products, squeeze bottles, baby bottles, pipes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• The Gilbreath Corp.
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Equipment and materials

[Continued from page 160]

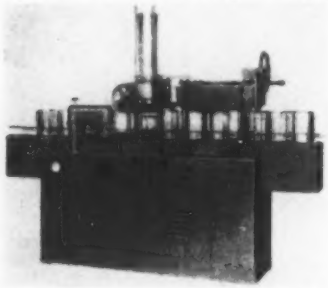
and fittings, and in textile-machinery parts, electrical and mechanical components and the like. *Montecatini Societa Generale, Milan, Italy.*

Versatile multiwall bag

A multiwall paper bag whose capacity can be varied to suit the properties of the product to be packaged without altering the dimensions that govern pallet patterns is offered by Owens-Illinois. The main feature of the new bag (developed originally for Wyandotte Chemicals Corp., Wyandotte, Mich.) is a pasted valve-reducing insert that reportedly permits standardization of pallet patterns regardless of the density of the packaged product. This insert, the company says, makes it possible to produce a bag of standard length and width, but with a thickness when filled that ranges from $3^1/_2$ to 6 in. Valve-reducing inserts can be made to customers' specifications to fit the filling nozzles of individual packing machines. Other cited advantages of the insert are that it is designed and applied to produce a tight self-seal that prevents spillage and that it makes the filled bag more compact and easier to handle. *Owens-Illinois Glass Co., Multiwall Bag Div., P.O. Box 1035-36, Toledo 1, Ohio.*

Lid dispenser and sealer

A high-speed automatic machine that dispenses lids and seals them on paint cans is available from Karl Kiefer Machine. The machine handles cans with capacities of from 4 oz. to 1 gal. Change-



over reportedly can be accomplished in 10 min. A variable speed control of six-to-one ratio is provided to speed up or slow down operations to deliver sealed cans at the rate of 18 to 100 per minute, the company says. In operation, the lids are dropped from a magazine and positioned onto the cans, where they are sealed by a series of compression rollers. A "no-can, no-lid" attachment is built into the machine, which is mounted on casters for portability. *Karl Kiefer Machine Co., 924 Martin St., Cincinnati 2, Ohio.*

Dome-top printing

A new technique developed by Crown Cork & Seal for printing on standard, deep-drawn dome closures of pressure

containers makes possible complete, all-over color lithography for this type of package. Shown here on the Spra-tainer can for Reddi-Wip, the printed-dome top offers excellent new package decoration and merchandising possibilities, the company says. Cited advantages of this application are that the colored, printed dome creates an attention-getting visual impression on dealers' shelves and the use of "log-roll" type printing on a portion of the label provides product identification when the package is laid down with the closure projecting outward in dairy cases or dispenser racks. *Crown Cork & Seal Co., Can Div., 9300 Ashton Rd., Philadelphia 36, Pa.*

Electric strapping machine

A new electric-power strapping machine that can be plugged into any electric-light socket has been announced by Signode Steel Strapping. The pushbutton-actuated Model AE is designed to provide exact and unvarying tension up to 1,600 lbs., after which a single-stroke hand lever seals and cuts the strap. The portable power-strapping tool weighs 2 lbs. and has a 115-volt motor. *Signode Steel Strapping Co., 2600 North Western Ave., Chicago 47.*

Anti-offset unit

An anti-offset unit featuring high-speed drying has been introduced by American Type Founders. Called the ATF Scotty Flo-Mix Unit, it is designed especially for small-size presses and duplicators. The unit operates from the press pump to lay a fine film of powder on the printed sheet, thereby speeding up drying time by permitting air circulation. This process, the company says, also prevents offset and smearing even on heavily inked jobs and eliminates sticking without having to use slip sheets. The unit is equipped with adjustable upright and crossbars and a ball-jointed air nozzle so the operator can direct the spray to the point on the sheet where it is needed. A patented powder agitator insures a constant, uniform spray. *American Type Founders Co., Inc., 200 Elmora Ave., Elizabeth, N.J.*

New industrial tape

A general-purpose industrial tape that is reportedly resistant to moisture, many acids, alkalis and solvents now is available from Minnesota Mining. Called Scotch brand Paklon Film Tape #681, it is a transparent, pressure-sensitive tape with long aging properties, due to the dimensional stability of the film backing, which is said to be inert to oils, alcohols, aliphatic hydrocarbons, alkalis and concentrated and dilute acids. Other reported properties of the tape are printability, excellent holding and sealing properties and high resistance to water vapor and aroma permeability. A special treatment allows the tape to be removed easily from the roll. *Minnesota Mining & Mfg. Co., 900 Bush Ave., St. Paul 6, Minn.*

High-speed counter

Counting speeds up to 2,000,000 pieces an hour are reported for the new Delta electric counting machine. The company suggests the use of this machine for high-speed bulk packaging opera-

tions and for fast, accurate inventory control. Box or bottle indexing conveyors can be combined with the counting machine, which automatically positions a new container underneath the batching device when the previous filling operation has been completed. Change-over from one item to another can be made without guides or other equipment, the company says. *Delta Engineering Corp., 126 W. Emerson St., Melrose 76, Mass.*

Improved protective coating

Synthetasine 300 is an improved resin lining designed to offer greater protection to hard-to-package products in steel shipping containers. The cinnamon-color, high-gloss lining contains more phenolic than epoxy resin and therefore offers exceptional chemical resistance, says the company. Other

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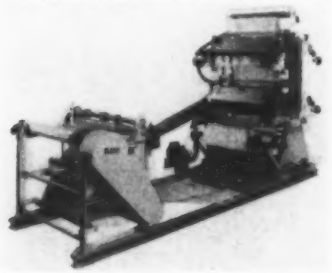
Equipment and materials

[*Continued from page 162*]

cited advantages of the product are that its flexibility and impact resistance are at least equal to earlier Synthetasine compounds and single-coat applications usually are sufficient. Among the products to which the company's improved product is said to be resistant are alkali, detergents, dilute mineral acids, chlorinated solvents, formaldehyde, detergent combined with hydrocarbon solvent, fatty acid, emulsions, alcohols, aromatic and aliphatic hydrocarbons, oils and greases and a variety of food products. *Synthetasine Protective Coatings, Inc., 600 Fifth Ave., New York 20.*

Expanded press line

Lee flexographic web-fed presses now are available in units of one to six colors with improved hot-air drying systems. The Lee Standard 27-in. press (shown), like the company's other redesigned equipment, incorporates an



infra-red hot-air drying system that blows thermostatically controlled air (from 0 deg. to 450 deg. F.) directly on the printed web to insure faster operating speeds without overheating or harming the material. Other features include forward and side adjustments on the unwind stand and brake-tension control; two ink-fountain rollers for each color; a plate cylinder throw-off that moves up and down away from the impression cylinder and ink rollers; splash-proof, stainless steel, self-locking covered ink fountains; elevator mounted for simplified up-and-down movement, and split-type plate-cylinder bearings. This last feature, the company claims, simplifies and speeds up cylinder changes. *Lee Machinery Corp., 28 W. 23 St., New York 10.*

Food or non-food tumbler

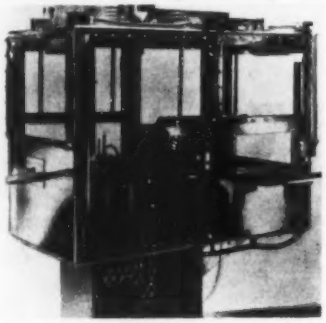
A re-usable tumbler for packaging a wide variety of food and non-food items—such as cottage cheese, bath salts and hosiery—is announced by Florsheim Mfg. Called Calypso, the tumbler is available with or without closures of various kinds and comes in six colors. *Florsheim Mfg. Co., Inc., 22 W. Monroe St., Chicago 3.*

Harder wax for tubes

A harder, more even coating for internally waxed collapsible metal tubes has been developed by Venesta, Ltd. This English company reports that the new coating widens the variety of products that can be packed in tubes because it gives greater protection to the product from the metal walls of the tube—and vice versa. The coating is produced by a flush-waxing process, in which metal tubes mounted on hollow pins pass by means of a conveyor through a heating chamber thermostatically maintained at a temperature of 121 deg. C. In the chamber, molten wax (also controlled at 121 deg. C.) is pumped into the tubes through the hollow pins, providing a continuous and regular film of wax whose thickness can be held constant during a production run. The internally waxed tubes then are immediately printed and capped to minimize the possibility of dust forming on the hard wax coating. The company reports that tubes of all metals, as well as rigid containers, can be coated by this same process. Flush-waxed metal tubes already are in commercial use for toothpaste, aqueous adhesives, pharmaceuticals and cosmetics. *Venesta, Ltd., Vintry House, Queen St. Place, London E.C. 4, England.*

Enclosures for sterile packs

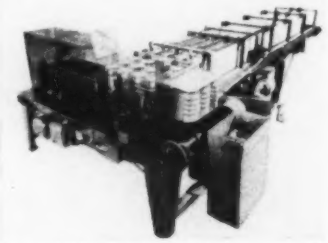
Stainless-steel enclosures to provide dust-free, sterile conditions for filling and sealing of pharmaceuticals and other sensitive materials have been developed. The enclosures can be supplied for any standard pharmaceutical filling and sealing machine in new or existing installations. Enclosures are maintained at a sufficient positive pressure so that the air flow is always outward, even



though an access door is open. The only air entering the enclosures is through intake baffles at the top of the units, where the air first passes through an electronic precipitator with ionizing cell or glass fibre filters and then past a series of ultraviolet lamps for sterilization, before being distributed into the enclosures. The enclosures are equipped with observation windows on all sides, access doors for adjustment and maintenance, built-in glove ports and a filling door for replenishing the supply of bottles or ampoules. The interior is lighted with fluorescent lamps and also contains ultraviolet lamps which sterilize incoming ampoules, vials or stoppers. When ampoules are being sealed, the exhaust gases from the burners are vented to the outside through a flexible tube. The ultraviolet lamps shut off automatically to protect the operator when an access door is opened. *S. Blickman, Inc., 8400 Gregory Ave., Weehawken, N. J.*

End-opening caser

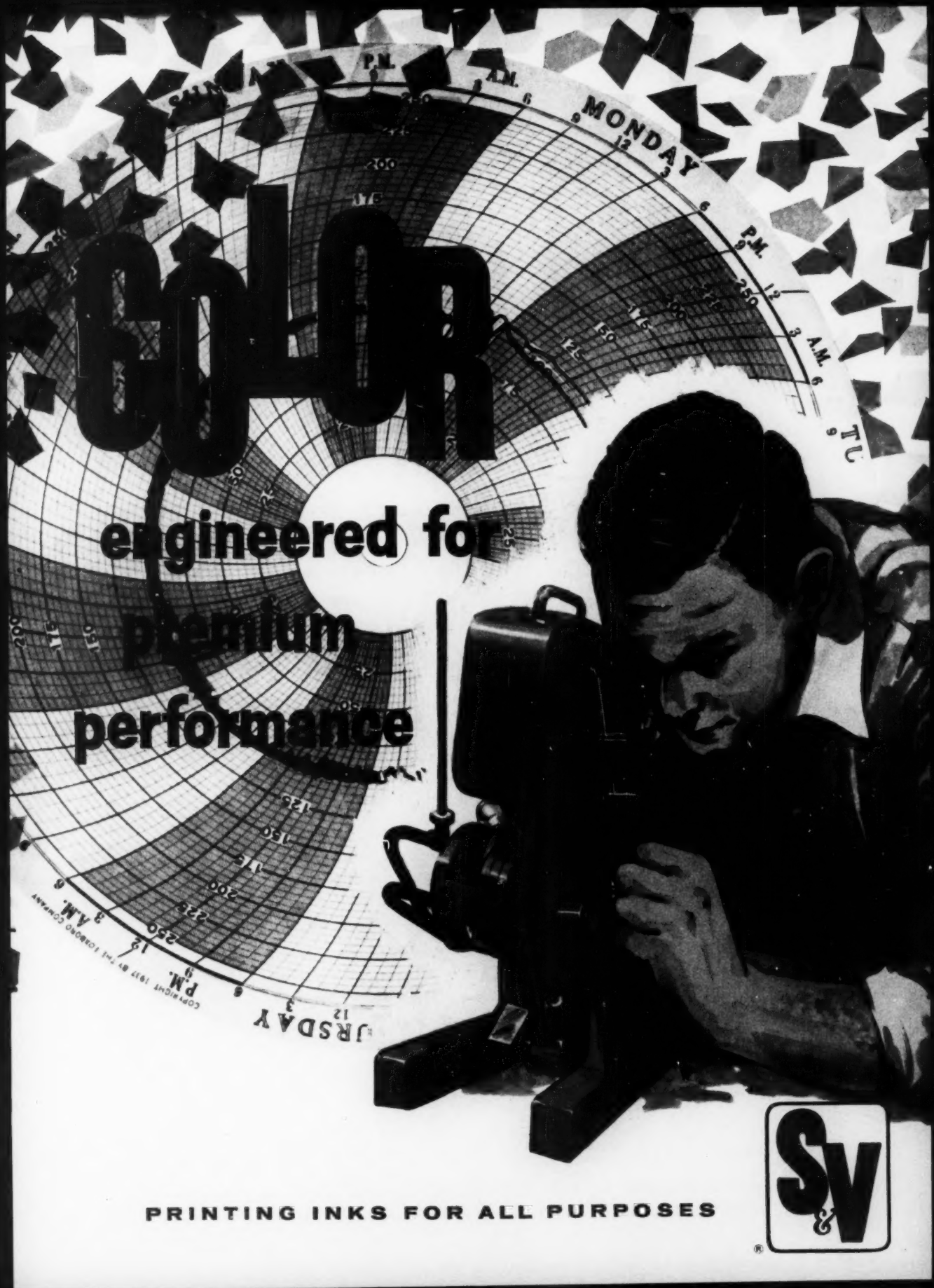
Fibre savings of 15% are possible with its new end-opening caser, claims Food Machinery & Chemical. The machine is designed primarily for single-tier loading of 46-oz. and No. 10 cans, but may



be used for smaller-sized cans as well. Cans travel upright on a wire-mesh belt conveyor and are carried through divider lanes into a loading chamber, where a pusher plate slides a tier of cans into a shipping case previously positioned on the loading funnel. According to the company, this automatic operation prevents can rolling and eliminates the possibility of torn labels, scratched lithography, dents or split seams. Speed of the caser is rated at 1,200 cans or more per hour. Automatic safety features prevent incomplete loading patterns or the discharging of a tier of cans without the shipping case being in proper position. *Food Machinery & Chemical Corp., Canning Machinery Div., 333 W. Julian St., San Jose 8, Calif.*

Resilient strapping tape

A water-moistenable paper strapping tape reinforced with rayon fibres has been added to Nashua's "Itstix" line. The product, applied in the same manner as ordinary gummed paper tape, provides great sealing strength even in short strips, the company claims. The tape is constructed of an inner lining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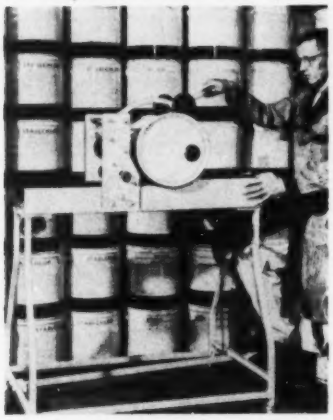
Equipment and materials

[*Continued from page 164*]

of linearly aligned rayon fibres embedded in a resilient material, a top lining of creped kraft and a bottom lining of flat kraft coated with animal glue. Cited advantages of the tape are economy, flexibility, high tensile and tear strength and quick, strong adhesion to many different surfaces. *Nashua Corp., 44 Franklin St., Nashua, N.H.*

5-gal.-can printer

A portable printing machine for printing labels, instructions and other matter on all types of 5-gal. cans is being introduced by Chapman Chemical. Called the Chapco Print-A-Can Printer, it is



said to operate at speeds up to 500 cans an hour and to offer printing economies. The 160-lb. caster-equipped machine operates mechanically, requiring no electric or air power, so it can be moved to any place on the floor where it is required. The machine uses rubber printing plates molded from standard typographic forms or hand set by assembling rubber type on an interlocking base. Inks and plates are available from the manufacturer. Printing area is 9 by 14 in. and type as small as 10 pt. can be reproduced satisfactorily, the company says. The ink used is fast drying, so cans may be put into production lines immediately after printing. An accessory machine, the Print-A-Drum Printer, also is available for printing 30- and 55-gal. drums. *Chapman Chemical Co., Metal Products Div., 600 N. Third St., Memphis 1, Tenn.*

Release paper

A new release paper recently added to Daubert's line can be used for interleafing of various items having tacky surfaces. The sheet is obtainable with one or both sides treated in standard 36-in.-by-200-yd. rolls, or slit or sheeted to order. *Daubert Chemical Co., 333 N. Michigan Ave., Chicago 1.*

Polyethylene produce bags

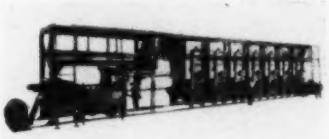
Geared for self-selection packaging, polyethylene produce bags that combine a window-effect design with merchandising panels and spots are available from Comet Packaging. The design printed on the bags permits maximum product visibility while maintaining a distinctive appearance, the company reports. Merchandising panels and spots incorporated into the over-all design serve as convenient places to mark price, poundage and other information. *Comet Packaging & Paper Co., Inc., 439 Fourth Ave., New York 16.*

Carton-gluing guns

Carton-gluing costs can be reduced 67% with its new line of roller-type gluing guns, claims John P. Fox Co. Designed for applying a ribbon coating of glue to any flat surface, the stainless-steel guns can handle all low-viscosity cold gluing compounds without clogging, the company says. The guns are available in sizes from ¼-in. wide to 4½-in. wide. Cited advantages of the gluing guns are that they speed up the gluing cycle and eliminate waste. *John P. Fox Co., 1107 S. Mountain St., Monrovia, Calif.*

Heavy-duty roto press

A high-speed, seven-station rotogravure press with a new inking mechanism that reportedly operates without splashing at press speeds of up to 1,000 ft. per minute for paper, film and foil has been introduced by Inta-Roto Machine. The press has a maximum web width of 44 in. The first model of the new press, called the Rex, has been installed



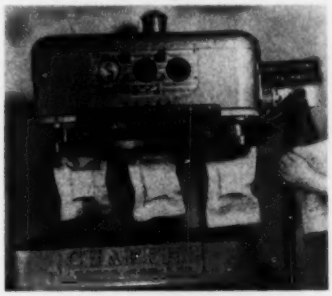
in the new converting plant of R. J. Reynolds Tobacco Co., Winston-Salem, N.C. In addition to high speed, other cited advantages of the press are fast change-over and free accessibility during runs. Of unit, walk-in design, the press has stations which including printing cylinder, ink applicator and doctor blade. These replaceable and reversible stations may be purchased separately for setting up subsequent runs, thus reducing make-ready time to a minimum, the company reports. The model shown here is equipped with a compensating roll register and electric-eye control. An electric synchronized drive controls unwind and rewind and sheeter. *Inta-Roto Machine Co., Inc., P.O. Box 454, Richmond 3, Va.*

Printing on tapers

A new attachment for silk-screen printing on sharply tapered objects has been developed for the Decoware machine. The attachment can be set up in five minutes and offers printing speeds up to 1,200 pieces an hour, according to its distributor, Atlas Silk Screen Supply. The hand-fed, foot-operated printing machine also has an attachment for printing flat containers. *Atlas Silk Screen Supply Co., 1733 Milwaukee Ave., Chicago 47.*

Improved vacuumizing device

The Ralph Chaffee company recently announced the development of a new, improved vacuumizing attachment for the Chaffee Rotor-Sealer, US 5-Star Model. One advantage claimed for the



new attachment is the fact that the filled bag is vacuumized as it is fed into the heat-sealing machine. This is reported to overcome the tedious, costly procedure of vacuumizing the contents of a bag before it is heat sealed. From the accompanying illustration, it can be seen how the small attachment at the right side of the sealer pulls a vacuum just before the bag is fed to the heat sealer. The device also is reported to be a time saver on the production line. *Ralph Chaffee & Co., 2360 Market St., San Francisco 14, Calif.*

Tubes for hardware

Transparent containers made of extruded Tenite acetate tubing are designed by Flex Products to provide neat, see-through packaging for small hardware items. The tough, durable tubes are available in a variety of sizes to hold such items as tacks and screwdrivers. The containers have acetate bottoms permanently cemented in and are threaded at the top to accommodate metal screw caps. Slip-on closures also are available. *Flex Products Corp., 231 Meadow Rd., Rutherford, N.J.*

Corded adhesive

A hot-melt adhesive that is supplied in cord-like form coiled on a reel has been

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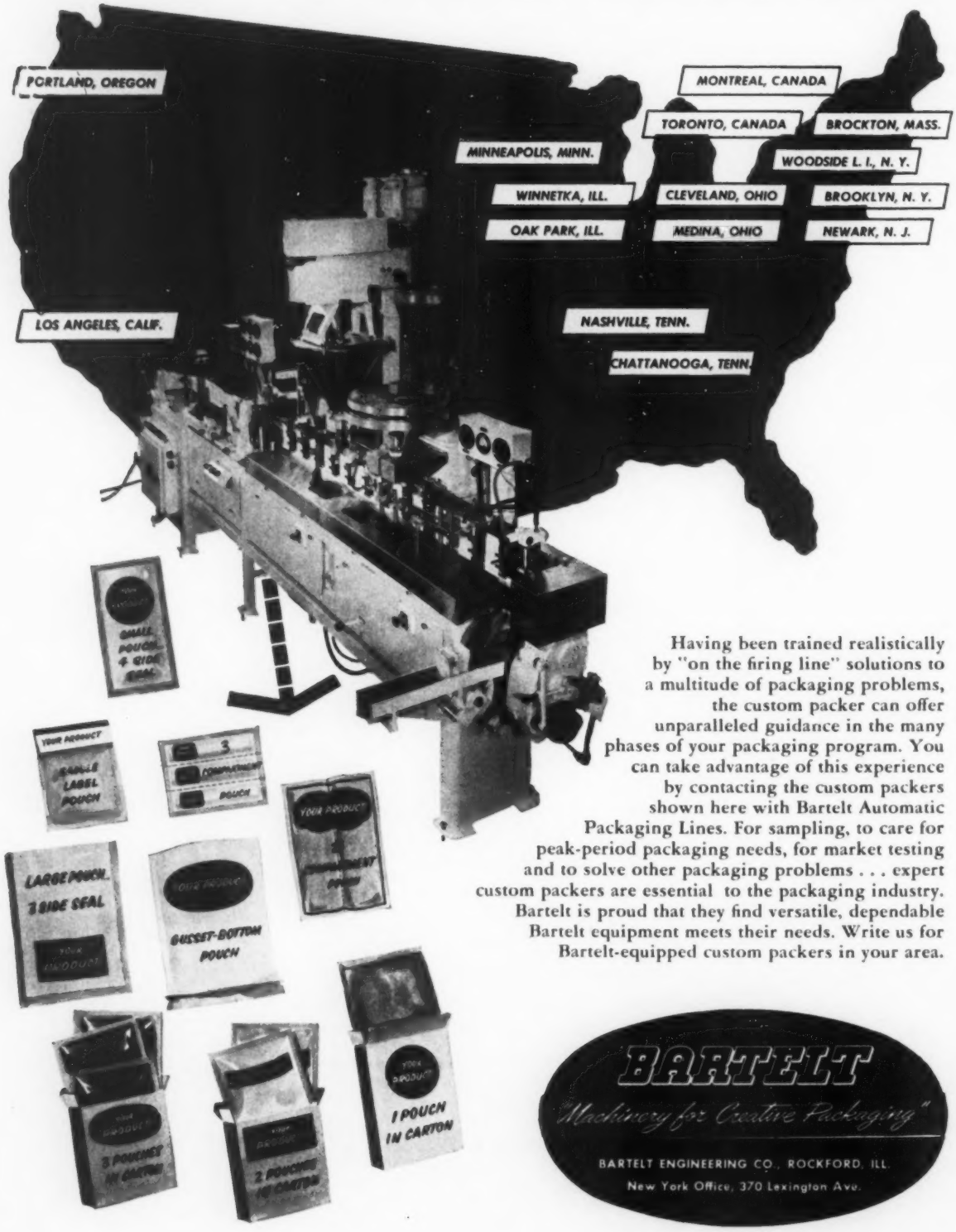

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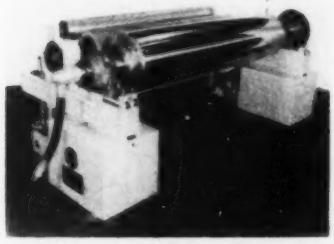
Equipment and materials

[*Continued from page 167*]

announced by United Shoe Machinery. Called Thermogrip #306, the ¼-in.-diameter adhesive permits melting at the time and point of use, thus avoiding a prolonged melted state that could degrade the quality of the adhesive, the company says. The adhesive, said to have greater affinity for certain treated papers, is designed for application with the company's feeding and melting device that can be attached to various types of packaging machinery. *United Shoe Machinery Corp., 140 Federal St., Boston 7, Mass.*

Extrusion laminator

An improved model laminator for extrusion coating of polyethylene to various web materials, such as cellophane, aluminum foil, paper and board, has been developed by Black-Clawson. The new machine, Model PL-600, is offered



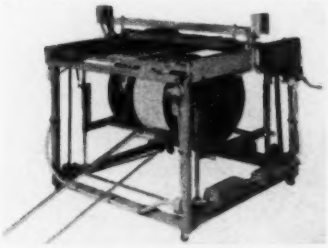
in widths up to 100 in. and at speeds up to 1,000 ft. per minute. The company reports these improvements in its new machine: greater accessibility to the controls, general openness of design and ease with which a roll may be removed from the machine without disassembling any of its components. The unit consists of cast-iron base frames housing and enclosing air cylinders which load a 10-in.-diameter, silicone-rubber-covered pressure roll against a chill roll. The chill-roll construction utilizes a patented spiral-fluted insert for efficient cooling. It is available in 15-, 18-, 20-, or 24-in. diameter. Adjustments are provided for horizontal location of the chill roll with respect to the extrusion die and for vertical adjustment of the rubber-covered pressure roll with respect to the chill roll and die. A system for cooling the rubber-covered roll during operation is incorporated and auxiliary idlers (such as the foil-spreader roll shown) can be mounted on the machine frames. *Black-Clawson Co., Dilts Div., 46 N. First St., Fulton, N. Y.*

Portable bagging scale

Richardson's high-speed bagging scale, Model E-50, is mounted on casters so that it can be rolled to serve many bins on one floor. Another new feature is an eye-level counter for tallying the number of bags being filled, which also permits the operator to keep an eye on all bagging operations. The machine is fitted with a detachable and changeable spout to accommodate 25-, 50- or 100-lb. bags. It weighs and fills open-mouth paper or textile bags with fertilizer, feed, grain or other materials. A minimum number of weighing components enclosed in a dust-proof housing makes the scale simple to operate, the company says. With power on and weigh hopper empty, the counterweighted end of the weigh beam is down and the inlet gate is opened. When the pre-set weight of material is received in the weigh hopper, the beam moves toward balance, closing the inlet gate and stopping the feeding action. After cut-off of the incoming stream of material, a mechanical linkage is automatically tripped, discharging the material from the weigh hopper into the bag. Rate of product flow into the inlet chute is controlled by a slide which increases or decreases the opening. *Richardson Scale Co., 668 Van Houten Ave., Clifton, N.J.*

New drum printer

Photo Process Screen has added a new mechanized model to its line of silk-screen printers for cylindrical objects. The new model, Sparky Jig "55," screen prints fibre and steel drums of 5- to 55-gal. capacity. The drum is rolled up a



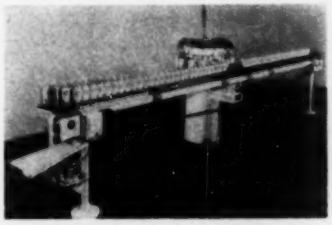
two-bar ramp (at left in the photo) into a cradle which is actuated by a lever to lift the drum into screening position. After the drum is screen printed, the lever is pulled back to lower the drum. An ejector handle rolls the drum out of its cradle and down a ramp at the right of the machine. Mounted on casters for portability, the electric-operated all-metal drum printer weighs 350 lbs. Safety guards and switches are included for operator protection. *Photo Process Screen Mfg. Co., 409 S. 11 St., Philadelphia 47, Pa.*

Fast-drying ink

California Ink is marketing a new, fast-drying ink for corrugated containers. Called Speed-Glo, the ink reportedly reduces drying time as much as 50%. It also offers better press stability and greater economy, the company says. *California Ink Co., Inc., 545 Sansome St., San Francisco 11, Calif.*

Two operations in one

A rotary-feed machine that combines aerosol-can gassing and mixing in one operation has been introduced by Alpha Engineering. The machine reportedly is suitable for liquid foods and other types of product which require mixing. Named the Alpha A-206 Roto-Shake, it is designed to handle 12- and 16-oz. cans, which move automatically along a pallet-



type conveyor to a 15-station rotary head. Here the cans are automatically gassed and shaken as they travel through the rotary feed cycle, after which they travel back to the conveyor for automatic removal. The machine's rotary-feed design permits continuous production of up to 60 cans per minute with a 12-second shake cycle, the company says. Longer shake cycles are obtainable by slowing the rate of feed. Other cited advantages of the machine: Valve design holds gas waste to a minimum; minimum maintenance is required because of simplified machine design; no compressed air or timing devices are required for mechanical operation, and a "no-can, no-charge" control on each valve assures efficiency. *Alpha Engineering & Machine Works, Inc., 800 W. Central Rd., Mt. Prospect, Ill.*

New trowelable mastic

Substantial cost savings reportedly can be effected with a new trowelable mastic for binding semi-rigid and rigid plastic foams (such as styrene and urethane) to themselves and to other materials. Called Bondmaster, it combines high strength, quick grabbing and fast drying, says the manufacturer, Rubber & Asbestos Corp. Available in black or neutral cream color, the product is said to minimize cell collapse on the surface of foamed styrene. Other cited advantages of the adhesive are: it is resistant to humidity and cold; it does not give or transmit odors or taste properties. The mastic may be applied with a saw-tooth spreader, notched trowel or spatula. *Rubber & Asbestos Corp., 225 Belleville Ave., Bloomfield, N.J.*

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The Print-A-Tube Co. of Rochelle Park, New Jersey, developers of these attractive and functional packages, took advantage of Du Pont's family of fine polyethylene resins to select one giving the optimum properties for this application. For all laminates and coatings, ALATHON 16 and 34 are particularly well suited.

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Send additional property and application data on Du Pont ALATHON polyethylene resin.

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Plants and people

Monsanto Chemical Co. has purchased from **Owens-Illinois Glass Co.** the half-interest share in ownership of **Plax Corp.**, Bloomfield, Conn., which Owens-Illinois acquired in 1953. The remaining half interest in Plax is owned by **Emhart Mfg. Co.**, Hartford, which created the firm, now a leading blow molder of polyethylene bottles and a producer of biaxially oriented polystyrene sheet and film for packaging. Monsanto recently announced an agreement with Plax by which it became a sales agent for the polystyrene material.

American Can Co., New York, and **Marathon Corp.**, Menasha, Wis., have agreed to merge, pending approval this month by the stockholders of both companies. The terms of the merger call for American Can to acquire all of Marathon's assets and subsidiaries. According to Canco, the merger is a major step in its program of integrating raw-materials supply with manufacturing operations. Canco will continue to purchase substantially from other paper suppliers and Marathon will maintain service to all its present customers.

Canco recently initiated what is reportedly the can-manufacturing industry's first complete lines for processing tinplate from coils in the Midwest. The installation is at the firm's St. Louis plant and constitutes a means of counteracting rising steel prices, the company says.

John D. Czarnecki has been appointed manager of research-plastics for the **Bradley Container Corp.** of Maynard, Mass., and for **Pittsburgh Plastics Co.** of Pittsburgh, both Canco subsidiaries.

A. F. Goat W. R. Goat

Arthur F. Goat has been elected president of **Champlain Co., Inc.**, Bloomfield, N. J. Mr. Goat will continue to direct the firm's sales activities. **W. Richard Goat** is now executive vice president and treasurer, and **Hans D. Smith** has been made secretary and assistant treasurer.

Following the recent acquisition of **The Gardner Board & Carton Co.** of Middletown, Ohio, by **The Diamond Match Co.**, New York, a change in Diamond's corporate title has been voted. The company is to be known as the **Diamond Gardner Corp. Colin Gardner, III**, and **Edward T. Gardner, Jr.**, will become vice presidents and members of the board of Diamond Gardner, while **Colin Gardner** and **Harold E. Wright** will become vice presidents of the merged company. Gardner Board & Carton becomes **The Gardner Div.** of Diamond Gardner.

Richard L. Siegel has been promoted to vice president and general manager of the Gardner Div. He will also be responsible for the general coordination with his division of the following Diamond Gardner subsidiaries: **Gardner-Brooks, Inc.**; **The Gardner Container Co.**, and the **Manchester Machine Co. Bruce W. Martin** has been made administrative vice president of the Gardner Div. and will be responsible for operating, engineering and industrial relations matters in addition to directing coordination between his division and two subsidiaries: **Dayton Paper Stock Co.** and the **Yoder Engraving Co.**

William Aiken has been named director of research development for the general products group of Diamond Gardner, which includes the Gardner Div., while **Delbert C. Meyer** has advanced to director of engineering, replacing **Arthur R. Harvey**, retired.

Leroy Liden has been elected vice president of the Diamond Gardner subsidiary, Gardner-Brooks, Inc., Springfield, Mass. He will continue to serve as assistant to the president as well as directing all sales activities.

Powlison

Keith Powlison, vice president and secretary of **Armstrong Cork Co.**, Lancaster, Pa., has retired. **Albert H. Sheaffer** has been appointed acting secretary until the election of a successor. Mr. Powlison had been associated with Armstrong since 1922.

As the first step in a $3,000,000 program of plant expansion and modernization, **Companhia Federal de Fundicao**, Rio de Janeiro, Brazil, recently completed reconstruction of its plant for the production of equipment for use by the pulp and paper industry. **The Black-Clawson Co.** and **Parsons & Whittemore, Inc.**, both of New York, hold major interests in the company.

Carl C. Landegger, Jr., a director of Black-Clawson and vice president of Parsons & Whittemore, heads the new enterprise, which will make available to the Brazilian paper industry the entire Black-Clawson line of equipment. **Tany Agronin** is general manager of the firm; **William A. Zonner**, sales manager; **John Sheley**, production manager, and **Ray Hovel**, assistant to Mr. Agronin.

Federal Adhesives Corp. has become affiliated with **Morningstar, Nicol, Inc.**, both of New York. Facilities of **Paisley Products, Inc.**, a Morningstar subsidiary, will now be available, in combination with those of Federal, to improve customer service. Sales and technical service staffs of both subsidiaries will remain unchanged.

The **Haberland Mfg. Co.**, Clifton, N. J., manufacturer of cold swelling starch products, has been acquired by Morningstar from **W. A. Scholten's Chemische Fabrieken, N. V.**, Foxhol, Holland. The new facilities will be operated as the **Haberland Div.** of Morningstar, Nicol, Inc.

Merrill

Ralph K. Merrill has been appointed to the newly created position of packaging coordinator at **Gerber Baby Foods**, Fremont, Mich. Mr. Merrill will direct the expedition of packaging programs and will serve as chairman of the packaging committee.

West Virginia Pulp & Paper Co., New York, has acquired **Virginia Folding Box Co.** of Richmond, Va., which will be operated initially as a subsidiary of the parent company and later will become a division. There will be no change of management or other personnel. **Lewis G. Chewning** continues as president.

Harold J. Schneider has been assigned to the New York office of **United Shoe Machinery Corp.**, Boston, Mass. He will sell the company's new Thermogrip hot-melt adhesive system and Boxmaster carton-forming equipment in southern New England, New York State, New Jersey, Pennsylvania, Maryland, Delaware and parts of Virginia.

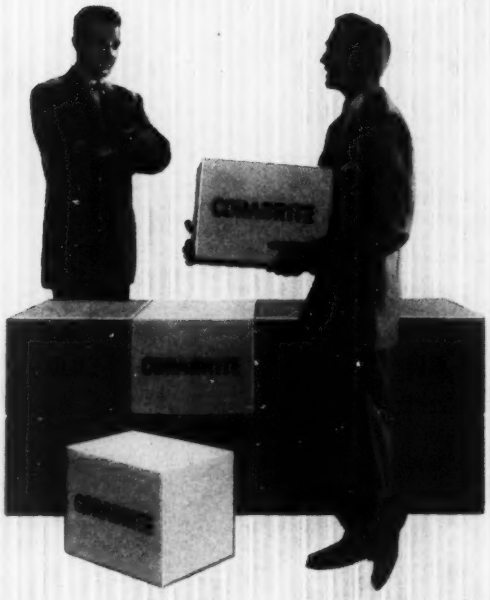
Denning

George S. Denning has been promoted to the newly created position of executive vice president of **W. C. Ritchie & Co.**, Chicago, subsidiary of **Stone Container Corp.** Mr. Denning, with Ritchie for 38 years, was vice president for sales merchandising.

Standard Packaging Corp., New York, has appointed **David W. Guthrie** as product sales manager for ice-cream packaging.

Reynolds Metals Co., Louisville, Ky., has announced a $250,000 expansion of its packaging research and development laboratories at Richmond, Va. New equipment includes temperature-control cabinets, a four-color gravure press, a

"Bright idea"



Your company name and message show up better on brighter, smoother H&D Corabrite corrugated boxes. Improving product identification is always a bright idea. Better see H&D.

HINDE & DAUCH

Subsidiary of West Virginia Pulp and Paper Company

AUTHORITY ON PACKAGING • SANDUSKY, OHIO
14 FACTORIES • 42 SALES OFFICES

Using package inserts?

Call on Carey—the package insert specialists

Carey Press has the specialized know-how and the specialized equipment to handle every type of package insert job. Result: Carey customers get quick delivery of high quality work at low prices. Find out how 1/16" saved more than $4,000 with Carey-Purchasing Agent consultation.

round-the-clock operation
1, 2, 3, and 4 color printing presses
large and small runs
inventory roll stock with sheeting equipment
printing for special chemical tolerances

See for yourself. Get in touch with Arthur Friedman, Printing Engineer and Sales Mgr., and find out why so many leading companies "call on Carey" for their package insert jobs.

63 years of achievement

CAREY TRIAL RUN SERVICE eliminates tie ups in your packaging production line.

Carey Press will supply you with a quantity of blank stock, cut and folded to the exact size of your package inserts, for testing on your automatic inserters and other packaging production equipment. That way you're *sure* you can handle the job *before* you give Carey the go ahead.

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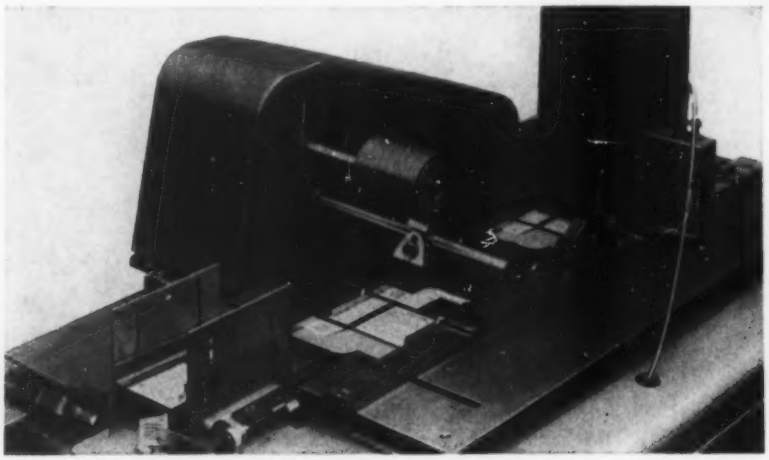

Printer-Coder

THE STANDARD OF QUALITY IN CARTON SET-UP

Print and Set-up in one operation. Another innovation from BIVANS, the quality name in cartoning equipment.

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Dist. By New Jersey Machine Corp., Hoboken, Cincinnati, Chicago, Los Angeles

Plants and people

plastics extruder and laminator, and machinery for coating, laminating and spooling foil.

Williams

Harry Williams has been named sales engineer in the Chicago office of the Packaging Machinery Div. of **Food Machinery & Chemical Corp.**, Philadelphia, Pa. FMC recently opened a new application-engineering office for its materials-handling equipment at 5 N. Wabash Ave., Chicago, with **Lee DeWent** in charge.

The purchase of the total assets of the **Hurlbut Paper Co.**, South Lee, Mass., by **The Mead Corp.**, Dayton, Ohio, has been approved by the boards of both companies. Hurlbut will operate as a

Blum Harris Kampf

Mead subsidiary under the same management, with **Edward A. Sitzer** continuing as president.

Robert J. Blum, Arthur L. Harris and **H. Warren Kampf** have been elected vice presidents of Mead. Mr. Blum is president of **Mead Board Sales, Inc.**, and **Excello Paper Products Co.**

Drake

In his new position he will coordinate sales of all Mead paperboard and converted paperboard products. Mr. Harris is president of **Mead-Atlanta Paper Co.** He will continue to headquarter in Atlanta. Mr. Kampf is president of **Mead Papers, Inc.** He will locate in the company's Dayton headquarters.

John A. Drake has been appointed director of market research for the company, including all wholly owned subsidiaries.

The board of **Philip Morris, Inc.**, New York, has approved in principle the acquisition of **Franklin Research Co.** of Philadelphia and **Polymer Industries, Inc.**, of Springdale, Conn., and Greenville, S.C.

Arthur L. Freeman, Thomas J. Horty and **Edgar H. Wolf, Jr.**, have been appointed packaging engineers by **Mead Johnson & Co.**, Evansville, Ind., nutritional and pharmaceutical firm. **Carlos**

Amber glassine or greaseproof inner liner.
Coated glassine pouch paper. Prints clearly.
FRESHLY ROASTED
COFFEE
THE FINEST OF BLENDS
Hotel and Restaurant
COFFEE
Laminated glassine membrane.
INSTANT
COFFEE
protection
How to Package Taste and Aroma Appeal
Coffee contains essential oils to which it owes its delicious flavor. Proper coffee packaging calls for a paper that is greaseproof, a paper that will keep the full-bodied aroma of the coffee in, a paper that will prevent airborne contamination—will heat-seal, and a paper that will be economical and will fabricate on automatic packaging machines.
Rhinelander glassine and greaseproof papers fulfill these requirements perfectly.
We can help to solve your food or beverage protective packaging problem.
RHINELANDER PAPER
Rhinelander Paper Company, Rhinelander, Wisconsin
Subsidiary of St. Regis Paper Company

Creative packaging... makes merchandising break

BRACON bottles are playing a key role in the brilliant merchandising program that introduced Bayer® Nasal Spray this Fall. These squeeze-to-spray bottles provide a package to be used by only one person. Distinctive color coding and appropriate size make Bayer Nasal Spray "as personal as your toothbrush".

These economical containers, with built-in nasal plug, cap and spray tube assembled, are shipped to the customer's plant for efficient, high speed base filling and sealing.

BRACON packaging meets all kinds of requirements . . . in product merchandising, user convenience and production economy. Consider how creative packaging can stimulate your sales . . . investigate BRACON *squeeze-to-use* tubes, bottles and cans today.

Squeeze-to-use packaging by BRACON

BRADLEY CONTAINER CORPORATION Maynard, Mass.

New York • Chicago • Los Angeles • Toronto *A Subsidiary of American Can Company*

Plants and people

Sierra-Franco has been named to the new post of art director of Mead Johnson International, foreign-operations division of the firm.

Simpson

Robert A. Simpson and **Clarence W. Smith** recently celebrated 40 years of service with **Libby, McNeill & Libby**, Chicago. Mr. Simpson is head of the company's purchasing department, while Mr. Smith is administrative assistant to the president. Mr. Simpson is also chairman of the labeling committee of the **National Canners Assn.**

Ivers-Lee (Great Britain), Ltd., packaging-service specialist, recently completed the transfer of its facilities to a modern new location at 225 Bath Rd., Slough, Bucks., England.

Robert B. Turner is now general sales manager for **Inland Container Corp.**, Indianapolis, Ind. **R. G. Savidge** has been made division sales manager for Chicago, Milwaukee and Detroit. **L. N. Summers** holds a similar position for the firm's Middletown, Ashtabula and Erie districts.

National Petro-Chemicals Corp., a subsidiary of **U. S. Industrial Chemicals Co.**, New York, plans to construct an additional petrothene plant and increase the company's total yearly production of medium-density polyethylene resin to 175,000,000 lbs.

Carlson

C. Walter Carlson has been appointed container products field sales manager for the footwear and general products division of **United States Rubber Co.**, New York. Mr. Carlson, who has been with U. S. Rubber since 1946, will direct nation-wide sales activity from the company's Providence, R. I., plant.

A. Hicks Lawrence, Jr., has been named manager of aerosol propellent sales for the Freon Products Div. of **E. I. du Pont de Nemours & Co., Inc.**, Wilmington, Del. He succeeds **Thomas D. Johnson, Jr.**, recently appointed assistant director of sales for the division. **James C. Feldmann** has taken over Mr. Lawrence's former position as manager of specialty products sales for the division. **William A. Bours, III**, has been made director of sales, succeeding **Robert Joyce Thompson**, who is retiring.

Delrin acetal resin, a plastic material developed by Du Pont, is to be commercially produced at a plant the com-

GOLD

means business

Genuine Gold . . . the classic symbol of elegance and refined taste . . . can be applied like any ceramic label or decoration . . . at a cost only slightly higher than common color. Screen printed on glass or ceramic surfaces, permanently fired to resist abrasion and corrosion, Hanovia 22 Karat liquid gold adds the vital "extra" to any sales program.

Take advantage of the eminence inherent in real gold printing or decoration on ceramics.

For information, contact your glass container supplier.

Hanovia

CHEMICAL & MANUFACTURING COMPANY

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ENGELHARD INDUSTRIES

NABISCO

adopts PINK, the color of the year, for their new Deluxe Assortment of delicious cookies.

The exterior carton design is modern, attractive and dominantly PINK.

For the interior—3 items—LINERS, CUPS, CORRUGATED

Hamersley — **OPAQUE PINK GLASSINE** *Liners,* waxed, offer interior eye-appeal, preserve crispness, flavor and aroma.

Hamersley — **OPAQUE PINK GLASSINE** is used by their converters for the fluted *Cups* which nest the different varieties neatly, protecting them from breakage and adding to the attractiveness of the package.

Hamersley — **OPAQUE PINK GLASSINE** is used by converters for the sheet of single faced *Corrugated* placed over the nests of cookies for cushioning and appearance.

COOKIE, CRACKER and CAKE BAKERS can be assured of complete protection and compelling eye-appeal with Hamersley quality for *all* bakery products.

CONVERTERS can assure their customers of the same high quality plus maximum efficiency on *all* high-speed converting equipment by using Hamersley **GLASSINE** and **GREASEPROOF PAPERS.**

80 years of quality and service

HAMMER BRAND

THE HAMERSLEY MFG. CO.

PAPERMAKERS

Hansella PACKS

for high sales appeal

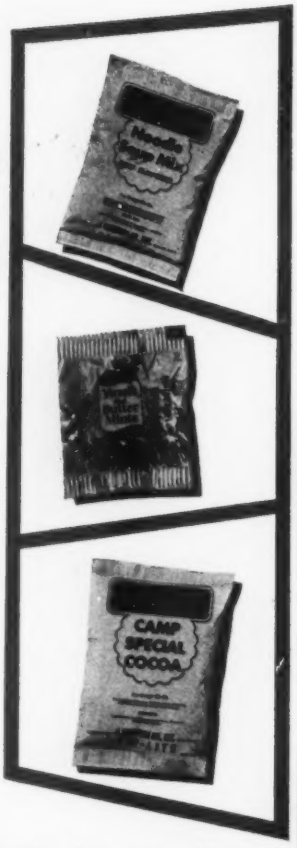
and

low production costs

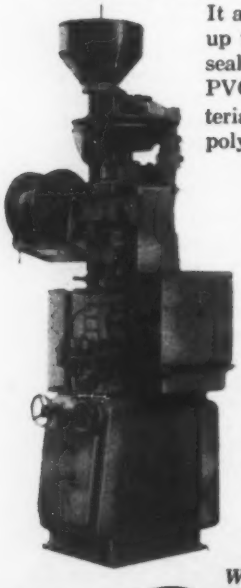
from the printed reel to the finished pack

When you use Hansella pillow-type bags you benefit from a combination of advantages that adds up to sales stimulating packaging at low production costs. Here are the chief features that account for the growing popularity of pillow-type packaging:

- Consumer Convenience
- Heat Sealing
- Transparency
- Rock Bottom Shipping Costs



The HANSELLA 125 is a complete packaging line in one machine.



It automatically forms, fills, and seals—making bags up to 6" x 7". And a specially developed electronic sealing device permits the use of *unsupported* pliofilm, PVC, saran, vinyl, and other thermoplastic film materials. The impulse sealer processes *unsupported* polyethylene.

Handles SOLIDS · GRANULES POWDERS · LIQUIDS · HARDWARE

Consider these Hansella 125 features in terms of stepping up your operation:

Interchangeable Heat Sealing Units. Machine is fitted for either heat-pressure, impulse, or electronic sealing.

Flexible Feeding. Uses either volumetric, net weighing, auger, or pump feed system.

High Output. Up to 3600 bags per hour with the standard or electronic sealer, and 2400 per hour with the impulse sealer.

Compact and Sturdy Structure. 3'4" x 15'11" x 12'5" high.

Write for complete information on the Hansella 125 today.

Hansella

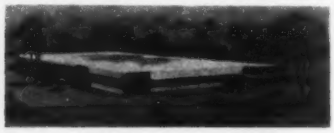
HANSELLA-WERKE ALBERT HENKEL A.G.
Viersen, West Germany

American Factory Branch: HANSELLA MACHINERY CORPORATION
Grand and Ruby Avenues, Palisades Park, New Jersey
Whitney 3-4700 — Cables — COHANSELLA

Plants and people

pany will construct near Parkersburg, W. Va. Delrin, an opaque and white thermoplastic material which can be tinted, is being tested in a number of applications including packaging.

C. H. Forsman Co. has moved to a new plant in Fair Lawn, N.J. The air-conditioned building is a complete unit for color printing in all methods of repro-



duction in conjunction with the company's own bronzing method, "Bronzsheen". It also contains a complete, up-to-date embossing department and facilities for the manufacture of folding boxes.

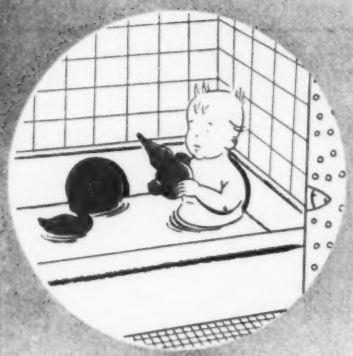
In addition to its new plant, the company is maintaining a New York City showroom at 12 E. 57 St.

Thome

John S. Thome has been elected vice president of **Sun Chemical Corp.**, Long Island City, N. Y. He has also been named general manager of the company's Graphic Arts Group, which includes **General Printing Ink Co., Rutherford Machinery Co., Bensing Bros. & Deeney Sales Co.** and the **Geo. H. Morrill Corp.**

W. L. Nelson has been named to head the newly organized fabricated products section of the plastics sales department at **The Dow Chemical Co.**, Midland, Mich. Film and sheeting, one of the four sub-divisions of the new section, will be handled by **L. E. Fake** as product manager. The Styrofoam group will be managed by **J. H. Pearce**, and **E. E. Chamberlin** will be responsible for saran fabricated products. Product manager for Saran Wrap will be **J. K. Stewart**. Dow has also created a re-organized merchandising group and has appointed **J. S. Ryan** to supervise fabricated products. **J. R. Stein** has been promoted to general manager of Dow's Louisiana Div. facilities, now under construction near Baton Rouge.

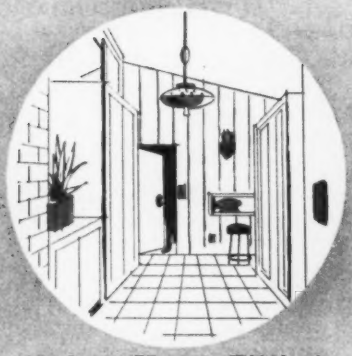
Subject to approval by its shareholders, **Cochran Foil Co.**, Louisville, Ky., will merge with **The Anaconda Co.**, New York. Under the proposed plan, Anaconda will acquire all of Cochran's assets and assume all of the latter firm's liabilities in exchange for capital Anaconda stock on the basis of one share for every 2½ shares of Cochran Foil stock. Cochran headquarters will con-



Baby Playthings

Toddler Toys

Housewares



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Premiums

● Whatever your custom needs in plastics manufacturing, call on Tupper's wide experience and modern manufacturing facilities. Our large, up-to-date plants, equipped with the best production machinery, are available for materials, injection molding, extruding, vacuum forming, blow molding—and other advanced processes.

The Tupper Engineering Department has developed the greatest number of patents in the industry for polyethylene seals, closures, and dispensers—and other items in other plastics. This know-how can be tapped by you to place your plastic products in a position of leadership.

Tupper seals and other Tupper products are protected against unauthorized manufacture by about 150 U. S. and foreign patents and patents applied for, plus numerous trademarks and copyrights.

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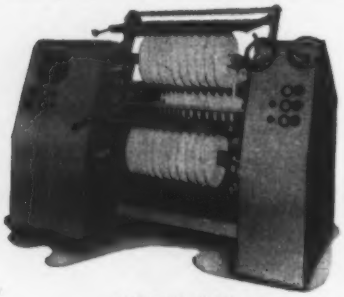

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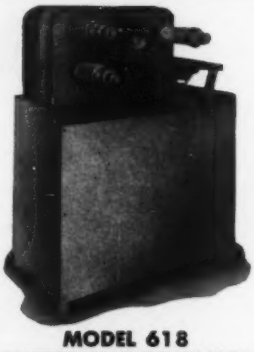
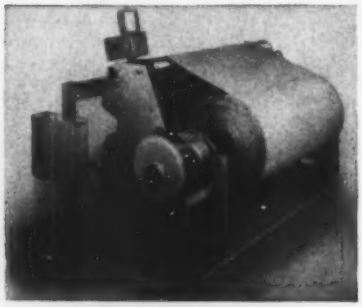
SHEAR, BURST, SCORE CUT AND RAZOR BLADE SLITTER

MODERNIZE with DUSENBERY SLITTERS AND REWINDERS

A complete line of slitters, rewinders and unwind stands is available. Illustrated machines are typical. These modern, up to date machines incorporate exclusive Dusenbery features which will improve your operations. Complete information and literature available. John Dusenbery Co., Inc., 275 Grove Ave., Verona, N. J.



MODEL 618
SLITTER AND REWINDER
SMALL • COMPACT



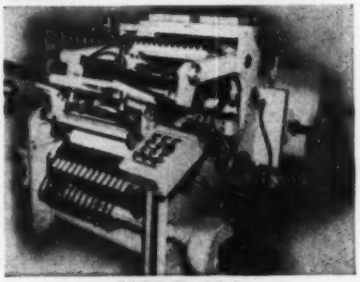
MODEL 704
AIR-OPERATED UNWIND STAND
RUGGED BUT ACCURATE & SENSITIVE

Manufacturers of:

SLITTERS • WINDERS
CONSTANT TENSION UNWINDERS
KNIVES • LEVERS • SLEEVES

Special Converting Equipment Designed to meet your Production Problems

Dusenbery
CONVERTING EQUIPMENT



MODEL 610
AUTOMATIC SHEAR CUT OR SCORE CUT ROLL SLITTER AND REWINDER

WOW! What mileage!

Findley adhesives have a way of giving dollar-saving results. Not only by allowing greater mileage, but also by cutting waste — by minimizing slowdowns and shutdowns. New, high speed adhesives are responsible for these results.

For money-saving proof give us a call — or let our specialists fill you in on the details. We'll show you how to . . .

PUT "WOW" IN YOUR PRODUCTION!

Findley's INDUSTRIAL ADHESIVES exclusively

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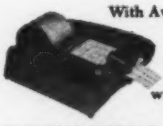
Your product tells its *own* story with Avery pressure-sensitive labels. Important or exclusive features, guarantees, trademarks, nameplates and approval seals, instructions and "use" information, package contents, merchandising aids and pricing are but a few of the many ways you can use Avery labels to *build sales!*



With Avery electric dispensers labeling is as much as 5 times faster than with ordinary methods!

Avery labels are self-adhesive . . . unaffected by heat or humidity and stay fresh-looking indefinitely.

Mail the coupon today for complete information.

AVERY ADHESIVE LABEL CORP., Custom Div. 127 B
117 Liberty St., New York 6 • 608 S. Dearborn St., Chicago 5 • 1616 S. California Ave., Monrovia, Calif. • In Canada, 207 Queen's Quay West, Toronto 1, Ontario • Offices in Other Principal Cities

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OUR BUSINESS IS:

tinue to be located at Louisville. **Archibald P. Cochran** will remain as president of the newly acquired company, with directors and officers drawn from personnel of Anaconda and Cochran.

Chester L. Williams, Jr., has joined **Brown Filling Machine Co., Inc.**, of Fitchburg, Mass., as plant manager. He was formerly associated with General Foods Corp. in a package-machinery engineering capacity.

Kynoch

Russell R. Kynoch has been appointed sales-promotion manager for the container divisions of **Stone Container Corp.**, Chicago. Mr. Kynoch will be responsible for the promotion of specialty products and other sales developments concerning corrugated containers.

Henry J. Roth has been appointed to the newly created post of film manager by **The Cryovac Co., Div. of W. R. Grace & Co.**, Cambridge, Mass. Mr. Roth will direct and coordinate development, production and marketing of Cryovac's new shrinkable packaging film for cheese, fish, meat and poultry. He will headquarter at Cedar Rapids, Iowa.

Harold L. Bills has been elected president and general manager of **Saniwax Paper Co.**, Kalamazoo, Mich. He succeeds **Stuart Irvine**, deceased. **R. W. Wheaton** has been appointed general sales manager.

Sandison

Cliff R. Sandison Agencies, Ltd., of West Vancouver, B. C., has been appointed to represent the Cheslam Div. of **St. Regis Paper Co.**, New York. Mr. Sandison is president of his own packaging specialty firm as manufacturers' representative in Western Canada.

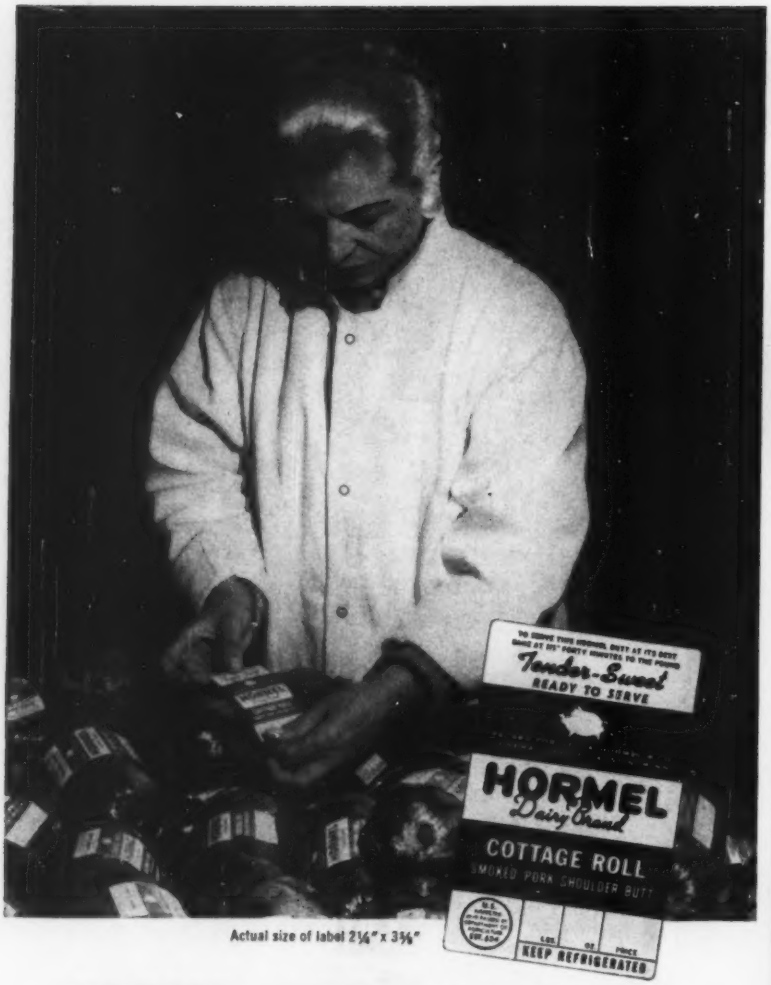
The major portion of its automatic packaging equipment has been purchased from **The Cenpro Corp.**, Northfield, Ill., by **Norman Packaging**, Chicago. Most of Cenpro's packaging personnel have joined Norman, which has leased facilities at 2332 W. Byron St. in Chicago. Norman plans to establish a quality-control department and purchase a new Conapac machine.

Frederick H. Greene, Jr., has been elected vice president of **National Research Corp.**, Cambridge, Mass. Mr. Greene will continue as director of commercial development and general manager of **NRC Vaculite Corp.**, subsidi-

Good tubes are the practical method of convenient packaging . . . but, equally important, they ideally get your name before your customers!

Standard
COLLAPSIBLE TUBE CO.
ROCHESTER, PA.

41



Actual size of label 2¼" x 3⅛"

HORMEL USES DENNISON PRES-a-ply* LABELS

To . . . emphasize serving instructions . . . display the famous HORMEL trademark . . . provide space for weight and price.

Dennison PRES-a-ply can help solve your labeling problems. Look at these unique advantages:

The modern, labor-saving way to label. No wetting, no waiting — just a press of the finger and they stick.

Adhere to a variety of films — and other hard-to-label surfaces.

Dennison-designed to meet *your* needs — and Dennison-produced to insure top quality.

Wide variety of stocks available; permanent or removable adhesives.

Four convenient PRES-a-ply dispensers — manual or electric.

**Registered trademark for Dennison self-adhering labels.*

FOR MORE INFORMATION WRITE...

Dennison

DEPT. 227, FRAMINGHAM, MASS.
in Canada: Drummondville, Quebec

Plants and people

ary producer of vacuum-metalized plastics. He will also be responsible for company public relations.

Resina Weller

Steve Resina has been elected president and treasurer of **Resina Automatic Machinery Co., Inc.**, Brooklyn. He succeeds **Emile de Bastos**, who died last summer. **Arthur Weller** has been named assistant to Mr. Resina.

William R. Wayman, Jr., has been appointed chief graphic designer of **Van Dyck Associates**, Westport, Conn. He will head the firm's new department of graphic and package design.

Orville C. Ottow has been promoted to sales manager of the corrugated division of **Triangle Container Corp.**, Chicago.

Titan Chemical Industries, Inc., Colorado Springs, Colo., recently held open house. Guests and stockholders were taken on a tour of Titan's newly opened aerosol plant.

Kennison

Richardson Scale Co., Clifton, N. J., has established a new regional office to serve the Eastern area, including New England, New York, New Jersey and Philadelphia districts. **H. E. Kennison**, as Eastern regional manager, is in charge.

Andrew J. Schroder, II, has been elected a director of **Scott Paper Co.**, Chester, Pa. **P. C. Baldwin** is now vice president in charge of production, engineering and research.

Permacel-Lepage's, Inc., is the new name of the former Permacel Tape Corp., New Brunswick, N. J. The company recently announced a complete line of label stocks for modern package and product design in a variety of embossed materials.

James F. Fulton has been appointed director of packaging for **The Seamless Rubber Co.**, New Haven, Conn.

Vincent Gilpin, Jr., has been named marketing research manager for the consolidated Downingtown Paper Companies by **Downingtown Paper Co.**, Downingtown, Pa. **Daniel C. Donoghue** has been appointed general sales manager for the consolidated companies, which include **Downingtown Paper Co.**,

Downingtown Paper Box Co. and Simplex Paper Box Corp. Sales managers of the three companies are, respectively, **William Mahood, Leo Hamilton and Domer Brenner.**

Donohue

Imco Container Corp., Kansas City, Mo., has appointed **Morton P. Donohue** to the company's New York sales office. Mr. Donohue will assist **LeRoy Durkin** in handling sales activities on the East Coast. He was formerly with Warner-Lambert.

National Steel Container Corp., Chicago, is building a plant at Pennsauken, N. J., for the production of fibreboard drums for National Steel's customers in the East.

Mead Board Sales, Inc., Cincinnati, Ohio, has been appointed exclusive sales agency for the **Huss Ontonagon Pulp & Paper Co.** Huss Ontonagon will produce 0.009 corrugating medium at its new mill in Ontonagon, Mich. Commercial production will begin this month and products will be sold by Mead's Cincinnati, Newark, Chicago, Detroit, Boston and Lynchburg offices.

National Can Corp., Chicago, has named **Arthur Ringman** as division sales manager of the company's newly created Southeast sales division, with headquarters at the Baltimore plant.

John M. Ahern, David A. Davies, Charles T. Gunn and William R. Muenster of the Food & Drug Index services of A. C. Nielsen Co., Chicago, have been named account executives.

On the occasion of its 85th anniversary, **The Cracker Jack Co.,** Chicago, has installed an unusual sign at its plant. Mounted above the firm's general office building, the sign presents on one side

a replica of the Cracker Jack package. On the reverse side is a replica of Cracker Jack's Campfire Marshmallow trademark. The display was designed by **Federal Sign & Signal Co.** of Chicago.

Schwinger

Heinrich Schwinger, chief designer for **Fr. Hesser, Maschinenfabrik-AG.,** Stuttgart-Bad Cannstatt, Germany, recently completed his 50th year with the company. Mr. Schwinger, who was made chief designer for Hesser in 1931, has been responsible for many packaging-machinery innovations.

John B. Munnikhuysen has joined **Nashua Corp.,** Nashua, N. H., as assistant chief engineer. **William E. Con-**

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RUBBER PLATE PRINTING PROBLEMS
with
NEW P&D
MODULUS
CONTROL!
SOLID AREAS!
Uniform, thorough coverage—no mottling or squeezing of ink film!
FINE LINE WORK!
Holds accuracy and sharpness for perfect reproduction every time!
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Cleaner dot structure . . . sharper detail . . . reduced "halo"!
COMBINATION PLATES!
Made with two durometer hardnesses—one for line, another for halftones!
P & D "MODULUS CONTROL" represents a new approach in rubber plate making—proved by thousands of field tests to give better impressions, longer wear! Plates made this way require less pressure to compress . . . less time to return to shape. Result: lighter printing pressure, clearer reproduction, perfect split of ink film!
AVAILABLE IN BOTH P & D INDIVIDUAL "STICK-ONS" AND COMPLETE "MINUTE-MOUNT" UNITS
ASK FOR TECHNICAL BULLETIN
Complete art, typesetting and engraving facilities available
WRITE TODAY for Complete Information
PORTER & DUGAS, INC.
Foremost in the Development of Rubber Printing Plates
606 SOUTH CLARK STREET

Plants and people

way has been promoted to executive assistant to the manager of manufacturing. **J. Robert Merrill** succeeds Mr. Conway as superintendent of the gumming and Sure-Hold divisions.

R. G. Glass has been promoted to the newly created position of technical sales director at the St. Louis, Mo., plant of Western-Waxide Div., Crown Zellerbach Corp., San Leandro, Calif.

Richard W. Beeler has been appointed manager of sales development for the Can Div. of Crown Cork & Seal Co., Inc., Philadelphia, Pa.

Graham

Clayton Corp., St. Louis, Mo., manufacturer of aerosol valves, has appointed **W. Earl Graham** as Eastern manager with headquarters in New York City. Mr. Graham was formerly associated with Crown Cork & Seal as research manager in its Can Div.

Robert D. Smith becomes vice president and general manager of **Mystik Adhesive Products, Inc.**, Chicago.

A new folding-carton plant at Renton, Wash., was opened recently by **Container Corp. of America**, Chicago. **William P. Peters** is general manager of the new facility, which will be supplied with paperboard by the firm's mills at Tacoma, Los Angeles and Santa Clara.

Stanley O. Baughman has been appointed plant manager of Container Corp.'s new corrugated-box plant under construction at Dolton, Ill. **H. R. Jones** has been named plant manager of the firm's Muskogee, Okla., facility and **Frederick C. Meyer** has been made sales manager for the Santa Clara folding-carton plant.

Glynn

Thomas M. Glynn has been appointed plant manager for **John H. Breck, Inc.**, Springfield, Mass. Mr. Glynn, who has been with Breck since 1943, had been production manager for the firm since 1946 until his advancement. He will locate in Springfield.

Reuben B. Robertson, Jr., president of **Champion Paper & Fibre Co.**, Hamilton, Ohio, has been re-elected a director of **Procter & Gamble Co. Dr. John McNeely** has joined the staff of the company's Texas Div. medical section. **John C. Allen**, who has been with Champion for 52 years, will retire this month. The firm plans to construct a new general office building in Hamilton with nearly 40,000 sq. ft. of office space.

Myers

Bensing Bros. & Deeney, Philadelphia, has appointed **Henry Myers** as Eastern sales manager, with headquarters at the company's main office. He succeeds **Robert Bensing**, who has been promoted to executive vice president of the company.

Central States Paper & Bag Co., St. Louis, Mo., has begun construction of an annex to its present location in Palatka, Fla., which will increase plant capacity to more than 150,000 sq. ft.

M. Clark Wakefield is now Midwest district sales manager of the Polyco-Monomer Dept., Chemical Div. of **Borden Co.**, New York. He will headquarter in the LaSalle-Wacker Bldg., Chicago.

E. W. Bliss Co., Canton, Ohio, has transferred its can-machinery manufacturing operations to the company's Hastings, Mich., location. **Roland H. A. Johnson**, can-machinery sales manager, remains at Canton sales headquarters.

Lesenger

Benjamin Lesenger has been elected president of **Berles Carton Co., Inc.**, Paterson, N. J. Mr. Lesenger will also head Berles' mill division, **Morris Paper Board Co., Inc.**, located in Paterson, N. J. He succeeds his father, the late **Morris Lesenger**.

Fibreboard Paper Products Corp., San Francisco, has appointed **Ben A. Wilson** as director of purchases.

Food & Drug Research Laboratories, Inc., is the new name of the former Food Research Laboratories, Inc. The company is now located at Maurice Ave. and 58 St., Maspeth 78, N. Y.

Bel-Art Products, West New York, N. J., maker of polyethylene and other thermoplastics, has created a vacuum-forming department and has established a Dubonnet Acetate Div., following its recent acquisition of **Dubonnet Products Co.** of Brooklyn. The staff and all facilities of the former company have been transferred to Bel-Art's location in West New York, where **C. Tacopina** will head the new Dubonnet Div.

Melvin K. Barrall and **William F. Mount** have been appointed technical

Can we help give YOUR PRODUCT some new glamor *on the side?*

DAREX side seam cements are non-metallic thermoplastics, designed to give a tight, strong but *solderless* bond along the side seams of metal containers. There need be no unsightly strip of naked metal on a DAREX-cemented seam.

These easily-applied compounds can be used successfully on many types of can side seams, are resistant to solvents, and have virtually no odor at normal temperatures.

Almost as well known as Dewey and Almy's famed DAREX "Flowed-in" Process for gasketing can ends, they are similarly efficient and economical. If you make . . . or pack in . . . cans, it will be worth your while to review their many advantages. We'll gladly outline them in detail.

★ ★ ★

ONE OF A SERIES

Through national magazine advertisements like the one opposite, Dewey and Almy is helping create still greater acceptance of our customers' goods . . . contributing toward their sales as we contribute toward improvement of their products.

SOHIO sales appeal sealed without solder!

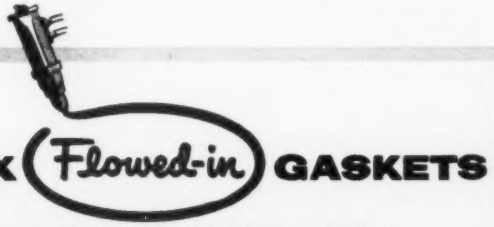
A clean, crisp, colorful design—and an *uninterrupted pattern of color*—puts solid sell where the customer sees it, on Sohio's new PREMEX motor oil can!

DAREX side-seam cement is an important part of the picture. Replacing solder entirely on this and many other containers, the cement does away with the solder strip along the side seam. Lithography covers every square inch of the surface . . . yet the seam is smooth, tight and rustproof!

Produced for Sohio by National Can Company, this eye-appealing container is sealed with DAREX thermoplastic side-seam cement. Applied to the edges of the can blank during can body formation, this cement "sets" at low temperature as the edges are joined . . . easily, swiftly, efficiently.

On the same can, DAREX "Flowed-in" GASKETS are also used to assure a strong, leakproof top and bottom. On other containers, from food jars to fifty-five-gallon drums, this unique gasketing procedure seals FIFTY BILLION units a year!

Continuing research has broadened the scope of the DAREX "Flowed-in" PROCESS to important new uses in the automotive and electronics industries as well. Maybe the complete DAREX "package" including machines, sealing compounds and localized technical service has a place in *your* plant.

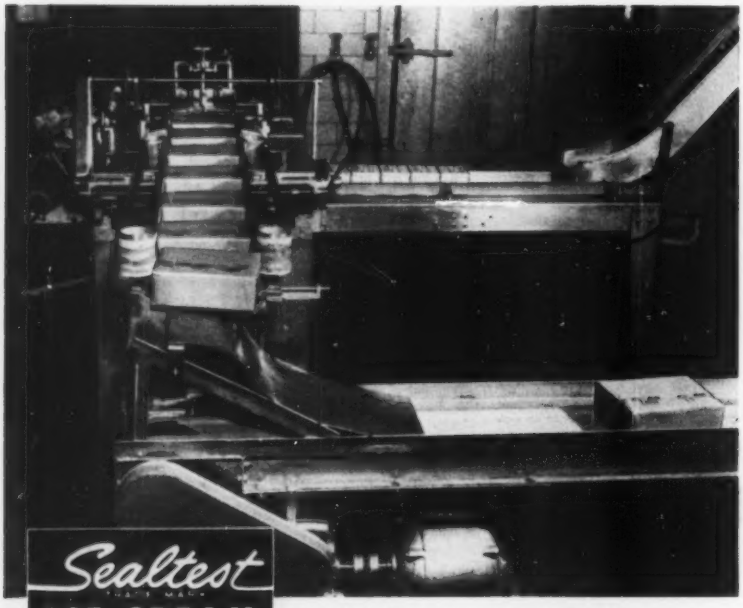


DAREX Flowed-in GASKETS

THE **STREAM**-LINED SEAL OF MODERN INDUSTRY

DEWEY AND ALMY
CHEMICAL COMPANY
DIVISION OF W. R. GRACE & CO.

Cambridge 40, Massachusetts • Chicago 38, Illinois • San Leandro, California • Montreal 32, Canada



One of the Hayssen installations at Sealtest, overwrapping 8 pints or 2 half gallons, interchangeably.

BETTER ICE CREAM BUNDLING

by HAYSSEN

● The Hayssen Automatic Accumulator and Bundler pays for itself quickly by eliminating the personnel who would bag, tape and mark the several pints and half gallons. The paper is fed from a roll, at half the cost of bag and tape; yet producing a neater, tighter, more easily handled bundle. Any standard imprinter can easily be co-ordinated with your Hayssen for bundle marking when wrapping with Kraft. We can save you time and money, and produce a better package for your distribution. Let our experienced packaging engineers help you with your packaging problems. WRITE US TODAY!

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Plants and people

control supervisors in the Film Div. of **American Viscose Corp.**, Philadelphia. **Thomas H. Derby** has been promoted to the newly created post of sales coordinator for the Film Div. He will work with **Thomas O. Williams**, assistant sales manager.

Sam Prussin has joined **Aerosol Techniques, Inc.**, Bridgeport, Conn., as director of new products and sales development.

Russell E. Schuster has been promoted to purchasing agent for **The William S. Merrell Co.**, Cincinnati, Ohio.

Jennifer S. Macleod has joined the staff of the **Package Research Institute, Inc.**, an affiliate of **Lippincott & Margulies**, New York. She will function as director of experimental research.

J. S. Littleton is a new account executive at Lippincott & Margulies.

Launched in 1951 as an experiment, **Kimberly-Clark's** Sales Promotion Center in Neenah, Wis., has become a valuable part of its sales and packaging operations, the company says. When the center was opened, it was described by President **John R. Kimberly** as "a

place where corporation products can be displayed as favorably as possible—and where the customer can see and hear the story of the institution behind these products."

Since its inception, the center has played a key role in the development of printing and writing papers and such products as Kimpak interior packaging.

Paterson Pacific Parchment Co. recently put into operation at its Sunnyvale converting plant near San Francisco a new Black-Clawson shear-cut duplex slitter-rewinder for handling glossy food wraps at high speed.

Wheeling Stamping Co., Wheeling, W. Va., is constructing a new office building at its Warwood location.

Lily-Tulip Cup Corp., New York, has appointed **John P. Grady** as director of selling operations.

Theodore Prisland has been appointed manager of the product design depart-

It's the most important moment in the life of your product — that moment when Mrs. Consumer makes her final choice. *Will your package win out over your competitor's?*

Helping Mrs. Consumer make up her mind in your favor is one of the jobs a Milprint package does best, with over half a century of experience behind it. And *only Milprint* can offer you so much specialized experience covering so many kinds of consumer products.

Knowledge, experience, complete facilities — they add up to the "Milprint touch" that compels sales. Put it to work for you — call your Milprint man *first!*

Printed Cellophane, Pliofilm, Polyethylene, Saran, Acetate, Glassine, Vitafilm, "Mylar"® Foils, Laminations, Folding Cartons, Bags, Lithographed Displays, Printed Promotional Material

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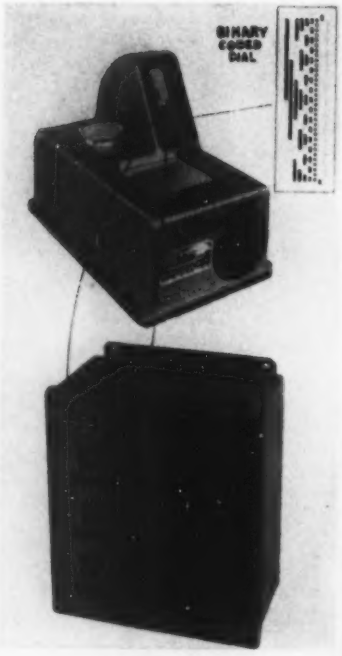
THIS INSERT LITHOGRAPHED BY MILPRINT, INC.

NEW from EXACT WEIGHT..



Basic Weight Classifier

For sorting of items by weight

Exact Weight's new Basic Classifier, employing Shadograph Scales with photocell controls, provides light signals which indicate correct weight, or over or under within pre-set limits. Accuracy is increased far beyond the scope of visual sensitivity.

The Shadograph-Controller offers a fast, accurate method for classifying, and for process control, of products and packages. It is also used in production line inspection of metal assemblies for missing parts and for checking contents of closed packages.

Any number of classifications can be obtained, from 2 to 128, and items of any shape or size can be handled in a capacity range from 2000 milligrams to 100 pounds.

The control system not only provides light signals, it may be used to actuate automatic transfer mechanisms, chart recorders for statistical and quality control; and to operate counters or alarm signals. Write for Bulletins 3333 and 3347.

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Precision ink transfer and accurate plate rolls are the heart of your press. Fine rolls make the difference between ordinary press work and high quality.

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Pamarco Custom-Cut Steel Gears, made in our own plant, insure accurate register. Specify them when ordering plate rolls.

INTEGRAL FLEXOGRAPHIC PLATE CYLINDERS

—for higher press speeds, closer printing tolerances, finer Flexographic printing

No-flex Plate Rolls are tubular for minimum weight, yet *integral* in construction for maximum rigidity. All surfaces are ground to guarantee closest tolerances on diameters and concentricity . . . assuring true "kiss" impresions. Available with either steel or aluminum body.

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Complete Roll Service . . . All Work Performed in the Modern Pamarco Plants

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- ROTOGRAVURE BASE CYLINDERS
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Manufacturers also of Rotogravure Base Cylinders and Rolls for General Industrial Applications

Plants and people

ment of **Latham-Tyler-Jensen**, industrial design firm of Chicago. **Robert Vogele** has been named manager of packaging and graphics.

Reder

William R. Reder has been appointed advertising and sales-promotion manager by **Ekco-Alcoa Containers Inc.**, Wheeling, Ill. Mr. Reder was formerly in the advertising department of Ekco Products in Chicago. He will locate at the main office in Wheeling.

James K. Ames was recently appointed central district sales manager for **Colton Chemical Co.**, a division of **Air Reduction Co., Inc.**, Cleveland, Ohio.

Scanlon

J. J. Scanlon, formerly Midwest sales manager for the former White Cap Co., will manage the combined sales office of the **Hazel-Atlas Glass** and **White Cap & Bond Crown Divisions** of **Continental Can Co., Inc.**, New York. He will locate in Chicago.

Spencer Chemical Co., Kansas City, Mo., recently dedicated its new research center near Kansas City.

Einson-Freeman Co., Inc., Long Island City, N. Y., has appointed **Henry R. Weber & Associates**, 470 S. San Vicentie Blvd., Los Angeles, as its Western sales representative.

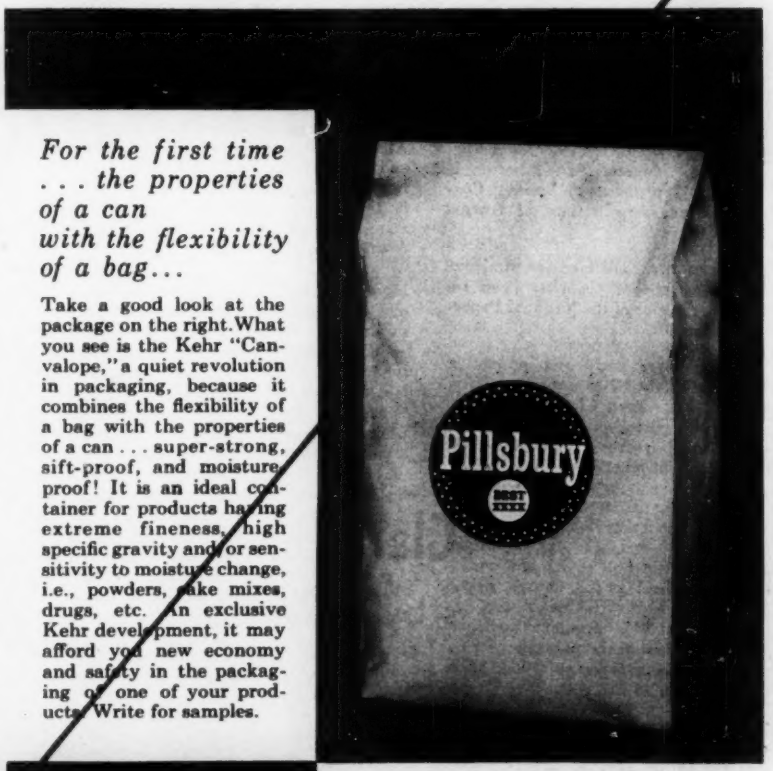
Ralph R. Wyckoff has been named sales-promotion manager by **A. J. Gerrard & Co.**, Melrose Park, Ill.

Plastic Jewel Box Co., Inc., has moved to new quarters at 255 Fifth Ave., New York 16.

Norman O. Seagrave, president of **Port Huron Sulphite & Paper Co.**, died Oct. 24 at the age of 58. Mr. Seagrave was a member of the **Technical Assn. of the Pulp & Paper Industry** and was on the board of governors of the **American Paper & Pulp Assn.**

Eugene B. Kardon, president of the **United Container Co.**, Philadelphia, died last Sept. 28. He was 41. Mr. Kardon also was president of the **Laroy Paper & Stock Co.** and a vice president of both **Blems Corp.** and **Philadelphia Container Co.**

A quiet revolution in packaging... the Kehr



For the first time . . . the properties of a can with the flexibility of a bag...

Take a good look at the package on the right. What you see is the Kehr "Canvalope," a quiet revolution in packaging, because it combines the flexibility of a bag with the properties of a can . . . super-strong, sift-proof, and moisture-proof! It is an ideal container for products having extreme fineness, high specific gravity and/or sensitivity to moisture change, i.e., powders, cake mixes, drugs, etc. An exclusive Kehr development, it may afford you new economy and safety in the packaging of one of your products. Write for samples.

Who started this quiet revolution in packaging?

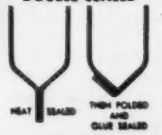
This is the first national advertisement for the Kehr Products Co. In a quiet way, we've been designing and manufacturing flexible packaging for over 40 years. Now it's time to speak up. We think we can lower your packaging costs with the same kind of technical skill that developed the "Canvalope." Try us.

The Kehr "Canvalope" offers you these unusual advantages

SIFT-PROOF—All seams are both heat-sealed and glue-sealed to preclude all possibility of even the finest powder seeping or sifting through.

MOISTURE-PROOF—Highest resistance to moisture-absorption is provided by an inside coating of a special tough, inert plastic.

SUPER-STRONG—The materials used and the exclusive Kehr methods of manufacture make this the strongest bag of its kind . . . Super-safe for severe handling.



IMPORTANT!

Two of the largest food companies* were able to market new products only because of the invention and availability of the Kehr "Canvalope"!

*Names on request.

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Designers and Manufacturers of: Bags, Pouches, Tubing, "Canvalopes," Sheets and Rolls from flexible films, foils and papers printed by the flexographic or rotogravure processes.

For your information

Jackson

Wayne W. Jackson, president of Hoerner Boxes, Inc., Keokuk, Iowa, was elected president of the **Fibre Box Assn.** at its recent 18th annual meeting in Washington, D. C. **Lester R. Edwards** has been elected association director. Mr. Edwards is president of National Container Corp., a subsidiary of Owens-Illinois Glass Co.

J. N. Andrews, executive vice president of Ohio Boxboard Co., has been re-elected a director of the **National Paperboard Assn.**

The market research and promotion committee of the **Glass Container Mfrs. Institute** has named **Glenn A. Mengle**, president of Brockway Glass Co., Inc., as chairman, succeeding **Franklin A. Pollack** of Thatcher Glass Mfg. Co.

"Non-foods business—the new frontier of the supermarket industry" will be discussed by members of the **Super Market Institute** at a Chicago conference to be held at the Conrad Hilton Hotel, Jan. 13-14. The dates were selected so that SMI members participating in the conference may also attend the 28th National Housewares Exhibit in Chicago, Jan. 16-23.

"How management can use design more effectively" is the theme of a three-day seminar to be held at the Sheraton-Plaza Hotel, Boston, Dec. 10-12. Purpose of the meetings, organized by **The Boston Institute of Contemporary Art**, is to give management personnel with design responsibilities, but without design training, new insights into and a broader understanding of design. Seminar leader is **William V. Judson** of General Electric Co.

The Institute has published a transcript of a conference on "Motivating the Creative Process," copies of which are available on request to **Winifred Macnish**, The Institute of Contemporary Art, 230 The Fenway, Boston 15, Mass.

A discussion of trends and forecasts in packaging, materials handling and product development will be included in the 29th annual **Fact Finding Conference** sponsored by the **Institute of American Poultry Industries**, to be held at the Municipal Auditorium, Kansas City, next Feb. 14-16. Theme for the event is "for the tomorrow-minded." For additional information, write to the Institute of American Poultry Industries, 59 E. Madison, Chicago 2.

A free nationwide consulting service now is available to businesses, industry, Governmental agencies and associations interested in developing libraries or information centers. More than 5,000 librarians and subject specialists, members of the international **Special Libraries Assn.** representing the U. S., Canada and 25 countries overseas, now offer expert advice on need, cost, equipment and staff problems. According to **Alberta L. Brown**, association president and librarian for the Upjohn Co., this follows a successful test of the service in the Chicago area. Those interested may write to the Special Libraries Assn., 31 E. 10 St., New York 3.

Eight carefully prepared standard samples of purified celluloses, representing substantially the entire range of commercial cellulose materials, are now available. Development of the standards is a result of the cooperative efforts of Committee D-23 of the **American Chemical Society Committee on Standards and Methods for Cellulose** and the **Tappi Chemical Methods Committee**. They will be useful to laboratories interested in the standardization of cellulose analysis methods. Standard samples are available for: cotton linters, acetate grade (Buckeye type 1AR500); acetate grade sulfite pulp (Rayonier's Rayaceta); prehydrolyzed sulfate tire cord pulp (Buckeye type V-5); rayon grade sulfite (Riordan's Novocell); cellophane grade sulfite (Rayonier's Rayamo); rayon grade sulfite pulp (birch Swedish pulp); paper pulp, regular grade (Swedish pulp), and paper pulp, greaseproof grade (Swedish pulp). Inquiries regarding these standard samples may be addressed to **E. E. Hembree**, Buckeye Cellulose Corp., 2899 Jackson Ave., Memphis 1, Tenn. European inquiries should be sent to **Karen Wilson**, chairman, International Committee on Cellulose Analyses, Uddeholm, Aktiebolag, Skoghallsverken, Skoghall, Sweden.

William M. Goldsmith, Chicago, has been elected president of the **American Society of Industrial Designers**. Past president, **Jay Doblin** of the Illinois Institute of Technology, is now chairman of the board of directors. Others elected to office include: vice president, **Francis F. Braun** of Product Presentation, Inc.; secretary, **F. Eugene Smith** of Smith, Scherr & McDermott, and treasurer, **Milton Immerman** of Walter Dorwin Teague Associates. New board members are: **Arthur N. BecVar**, General Electric Co.; **Paul McCobb**, Paul McCobb Design Associates; **Jean O. Reinecke**, Reinecke Associates, and **Peter Muller-Munk** of Peter Muller-Munk Associates.

Reservations by exhibitors in the 1958 **Packaging Machinery & Materials Exposition** are currently reported 19% larger than the total area occupied by the 1956 show. The exposition is scheduled for March 25-28, Convention Hall, Atlantic City, N. J. **K. B. Hollidge** of Arthur Colton Co. is chairman of the exposition committee. The show will be amplified by daily technical meetings to be conducted by the **Packaging Institute**. Additional details on the show are available from **Hanson & Shea, Inc.**, 1 Gateway Center, Pittsburgh 2, Pa.

The challenge of the West's agricultural market will receive major attention at next year's **Western Packaging & Materials Handling Exposition**, scheduled for San Francisco's Civic Auditorium, Aug. 11-13. Detailed information on the event may be obtained from **Clapp & Poliak, Inc.**, producers of the exposition, at 341 Madison Ave., New York 17, or 681 Market St., San Francisco 5.

The Market Research Department of the **Tag Mfrs. Institute** has been conducting for the past five years point-of-purchase selling studies in department, chain, food and specialty stores covering every marketing area in the country. The Institute's marketing studies are said to be the most comprehensive ever compiled on the subject. In addition, tests were made to formulate the best design, style, printing and selling message to be incorporated into an informative tag. One of the features of the study is that it brings to light new findings that the Institute believes will help manufacturers and retailers move merchandise off their counters faster. Included in the Institute's library are the following publications: "What Sells The Customer"; "Tags Clinch Impulse Buying Sales"; "Tags Help Sell 4 Out of 5 Home Appliance Customers"; "Prod-

What's doing

Dec. 9-12—**Chemical Specialties Mfrs. Assn.**, Hollywood Beach Hotel, Hollywood, Fla.

Dec. 10-11—**Society of the Plastics Industry, Inc.**, sheeting and coated fabrics division conference, Hotel Commodore, New York.

Jan. 13-14—**Super Market Institute, Inc.**, non-foods business conference, Conrad Hilton Hotel, Chicago.

Jan. 14-16—**National Flexible Packaging Assn.**, annual meeting, Biltmore Hotel, New York.

Jan. 16-23—**28th National Housewares Exhibit**, Chicago.

Jan 21—**National Canners Assn.** Convention, Atlantic City, N. J.

Jan. 22-26—**Potato Chip Institute**, Annual convention, Hollywood, Fla.

Jan. 27-30—**Plant Maintenance & Engineering Conference & Show**, International Amphitheatre and Palmer House, Chicago.

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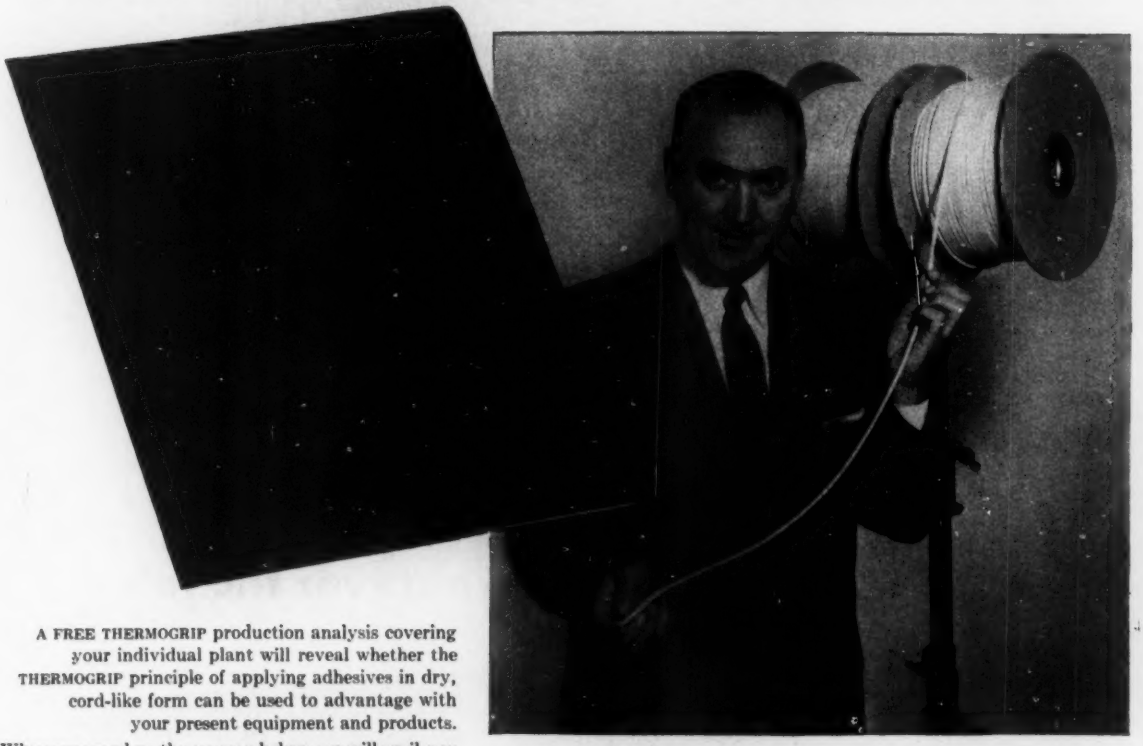
Fill in and mail coupon below now. It may save you thousands of dollars, production time, solve tough adhesive problems, help do jobs that were heretofore impossible.



A FREE THERMOGRIP production analysis covering your individual plant will reveal whether the THERMOGRIP principle of applying adhesives in dry, cord-like form can be used to advantage with your present equipment and products.

When you send us the coupon below, we will mail you a simple outline of the type of data we need about your production goals, problems, and type of equipment and stock you are running.

The greatest production successes with THERMOGRIP adhesive have come through its application on continuous feed machines with kraft, polyethylene, polyethylene coatings, foil, fibreboard, absorbent or porous materials, and many others.

It costs you nothing to find out about the possible savings THERMOGRIP adhesives can offer you. There's no obligation. You get the benefit of our production experience with many types of packaging materials and machines. Look into it today!

FILL IN THE COUPON NOW FOR YOUR FREE PRODUCTION ANALYSIS.

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Gentlemen:

I would like to receive a FREE THERMOGRIP ADHESIVE Production Analysis as soon as possible. Send your outline of the data you need. No obligation to me of course.

Name.....*Title*.....

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nets With Tags Outsell Products Without Tags by 13 to 1," and "Informative Tags Boost Sales 50%." Copies of any of the studies may be obtained free on request to the Tag Mfrs. Institute, 370 Lexington Ave., New York 17.

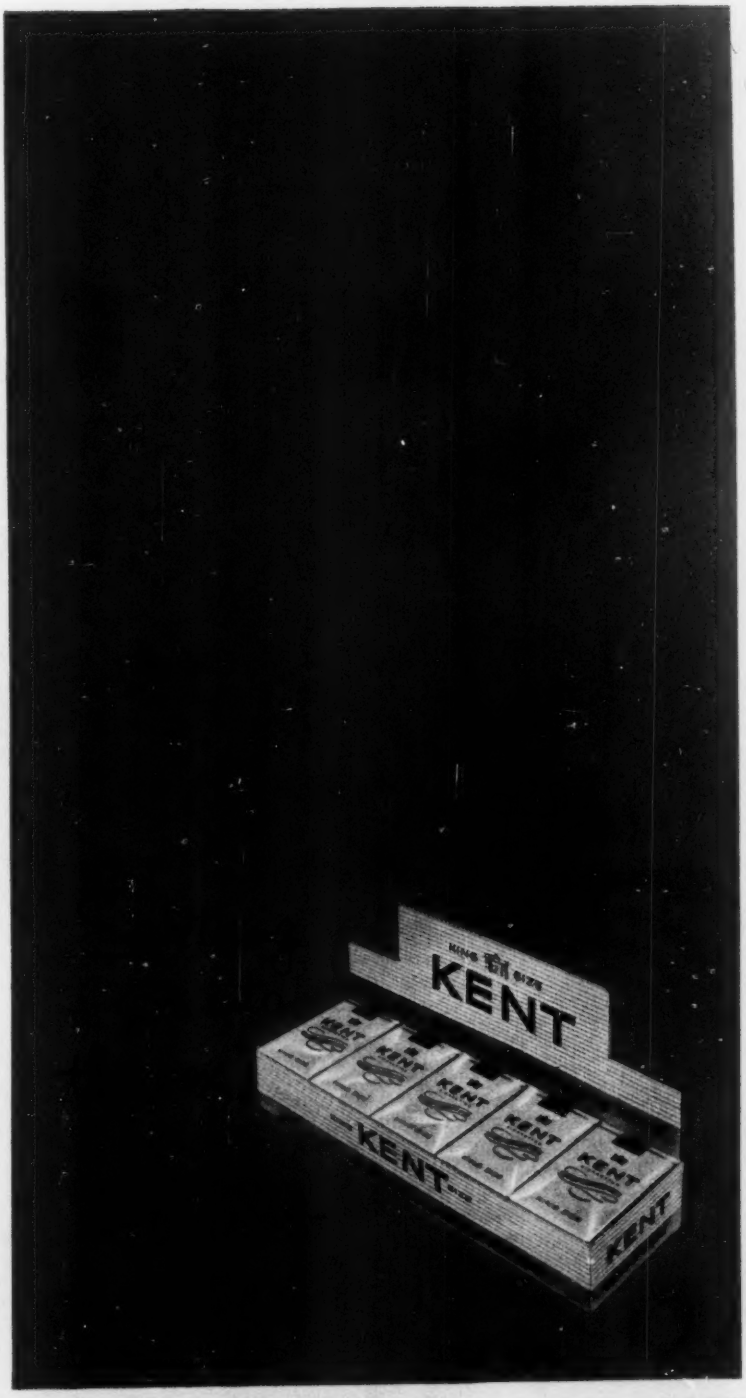
Jim Nash was elected president of the **Package Designers Council** at its recent fifth annual meeting. Mr. Nash, who was president of P.D.C. during its first two years, is head of Jim Nash Associates, Inc., New York design firm. **Karl Fink** was named executive vice president for a second term, **Margery Markley** was elected secretary and **Harry S. Lapow**, treasurer. Elected to the board of directors were **Robert Sidney Dickens, Frank Gianninoto and Gerald Stahl.** A significant event in P.D.C.'s program this year was a full-day conference on "The Role of Packaging in Integrated Marketing," co-sponsored by P.D.C. and the New York University Graduate School of Business Administration.

Nash

Entries in the 8th Lithographic Awards Competition will be judged by a group of experts from the graphic-arts and advertising fields in New York next month. The competition is conducted annually by the **Lithographers National Assn.** Entries are rated on the basis of technical excellence, originality of its art, design and typography, and its functional value. Announcement of awards will be made at LNA's 53rd annual convention, Arizona Biltmore Hotel, Phoenix, Ariz., April 28-May 1. Winning specimens will be reproduced in a four-color, 84-page Awards Catalog, to be distributed nationally. Announcement brochures and entry blanks may be obtained from the Lithographers National Assn., 381 Fourth Ave., New York 16.

The **150th anniversary** of the soft-drink industry was celebrated at the 1957 **International Soft Drink Industry Exposition** and **39th Annual ABCB Convention** in Washington last month. Both the exposition and the convention directed attention to the industry's sesquicentennial of progress and to opportunities ahead. Some 200 exhibits emphasized the vast difference between yesterday's manual operations and tomorrow's near-automation. General sessions of the annual meeting included subjects of broad interest to the entire industry.

The recent fall meeting of the **National Flexible Packaging Assn.** at White Sulphur Springs, W. Va., was attended by more than 260 members. The board of directors authorized the establishment of an over-all standing Technical Committee, with provision for subcommittees



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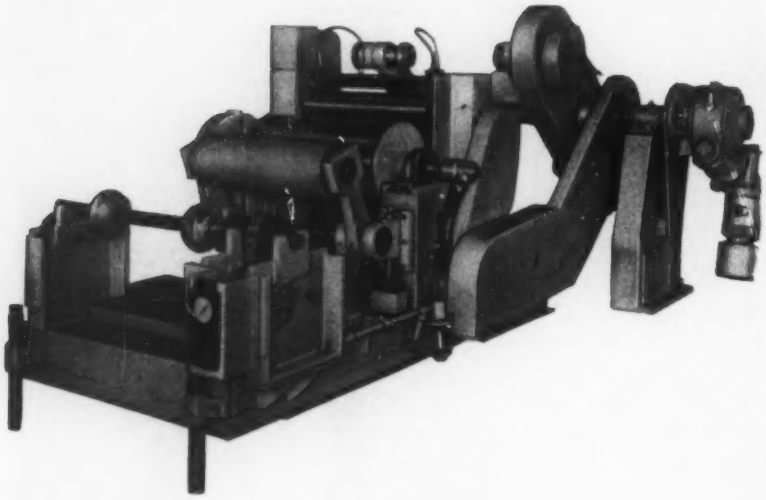

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to study specific problems such as flexographic and gravure printing. The Evaluation Policy on new or modified packaging materials was adopted unanimously. This will eliminate much duplication of effort by converters on new or altered materials being introduced and place responsibility on the supplier to develop basic information on converting techniques. The plan was accepted by the three cellophane manufacturers and can be adopted by other suppliers of films, foils and papers. **John M. Cowan**, NFPA managing director, gave a progress report on the association, calling attention to the following new members: **Kordite Co. Div., Textron, Inc.; Package Containers, Inc.; Polychemicals Dept., E. I. du Pont de Nemours & Co.; Mason Envelope Co.; Cee-Jay Extruders; Minnesota Mining & Mfg. Co.; Olin Mathieson Chemical Corp.; S. W. Speers Co., Inc., and U. S. Industrial Chemical Co.** It was announced that the next annual meeting of the association will be held Jan. 14-16 at the Biltmore, New York.

A second motion picture on the subject of color, titled "Color Magic," has been released by **Interchemical Corp.** for showings to industry, college and artist design groups throughout the country. This new 22-min. color-sound film illustrates some of the more important principles of the use of color in industry, in design and in the home. The film is a companion movie to "This Is Color," released last year. Arrangements for borrowing the 16-mm. film may be made through Interchemical representatives, or through the headquarters of Interchemical Corp., 67 W. 44 St., New York 36.

At recent panel sessions sponsored by the **Gravure Technical Assn.** in cooperation with the **Package Designers Council**, plans were made for better communication and closer cooperation among purchasing agents, package designers and gravure printers. The Package Designers Council was represented on the panel by **Robert Neubauer** of Robert G. Neubauer, Inc., and **Roy Madison** of Package Design, Inc., who called on the gravure industry to provide designers with more information on the possible uses of gravure printing, color charts and charts of gravure on special surfaces like aluminum foil. Other panel members included: **Thomas G. Prioleau**, General Foods Corp.; **Fred L. Baldwin**, Dobeckmun Co., and **Beaven W. Mills**, Robert Gair Div. of Continental Can Co.

The Research Library of the **Champion Paper & Fibre Co.**, Hamilton, Ohio, has literature available in the fields of science, patents and paper technology for personnel seeking information on

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Liners may be moisture and grease resistant and anticorrosive . . . can be furnished in parchment, glassine, aluminum foil, duplex kraft, cellulose acetate, polyethylene, etc.

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technical and scientific matters. More than 12,000 volumes are available, including 720 volumes and the complete series of the "U. S. Patent Gazette," first published in 1872.

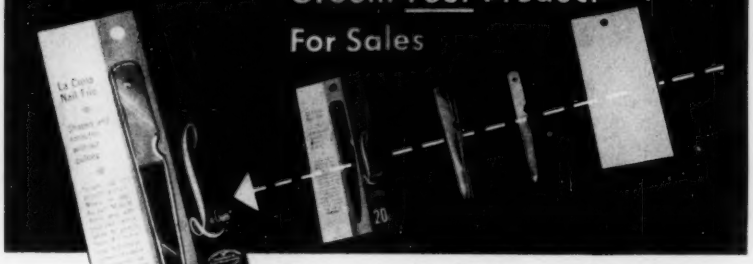
The Plant Maintenance & Engineering Show, to be held Jan. 27-30 at the International Amphitheatre, Chicago, will feature some 66 speakers at its 25 conference sessions. Conference sessions will be held at both the Amphitheatre and the Palmer House. The show and conference are returning to Chicago for the first time in three years. The event is expected to be the largest in its history, with 425 exhibiting companies occupying an exhibit area 50% larger than the last Chicago show. Both events are produced by **Clapp & Poliak, Inc.,** 341 Madison Ave., New York 17.

A new report entitled "Heat Seal Characteristics of Polyethylene Film" has just been published by **U. S. Industrial Chemicals Co., Div. of National Distillers & Chemical Corp.** First half of the 16-page booklet discusses the prime conditions for making satisfactory heat seals. The last half is devoted to a series of graphs showing heat-seal characteristics for various resins in USI's Petrothene polyethylene series. Copies of the booklet are available to members of the plastics and packaging industries from U. S. Industrial Chemical Co., Div. of National Distillers & Chemical Corp., 99 Park Ave., New York 16.

Eastman Chemical Products, Inc., subsidiary of **Eastman Kodak Co.,** has published a new book titled "Tenite Plastics Views: Color" which explains in text and full-color illustrations how plastics are color matched to other materials by a method that has developed more than 38,000 plastic color formulations. This 20-page book traces the development of a new Tenite color from receipt of a sample to be matched to successful formulation in a Tenite plastic. The book also describes how Eastman research and experimentation have broadened the field of applications for colored plastics by research in pigments, ultraviolet inhibitors and new formulations. Copies of the book—together with a new movie, "Portrait in Plastics," and a bronze-toned plastic medallion commemorating Eastman's 25th year in plastics—may be obtained from Eastman Chemical Products, Inc., Kingsport, Tenn.

The National Cotton Council and the **Textile Bag Mfrs. Assn.** are jointly sponsoring the promotion of cotton-bag sewing in new fields, aimed at maintaining as much yardage for cotton bags as possible. Consumption of dress-print yardage in bags was up from 1 to 2% in 1957, according to TBMA, indicating the value of the home-sewing promotion.

DOMEPAK - Low-Cost Way To Groom Your Product For Sales



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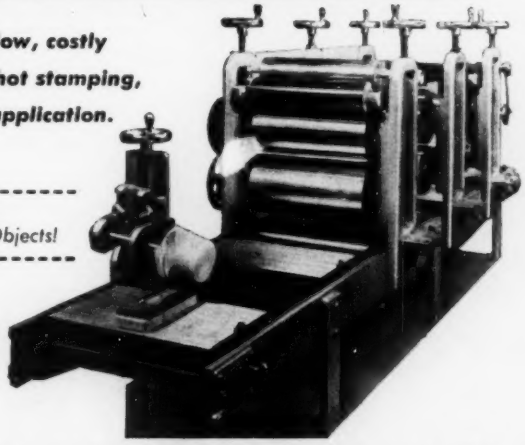

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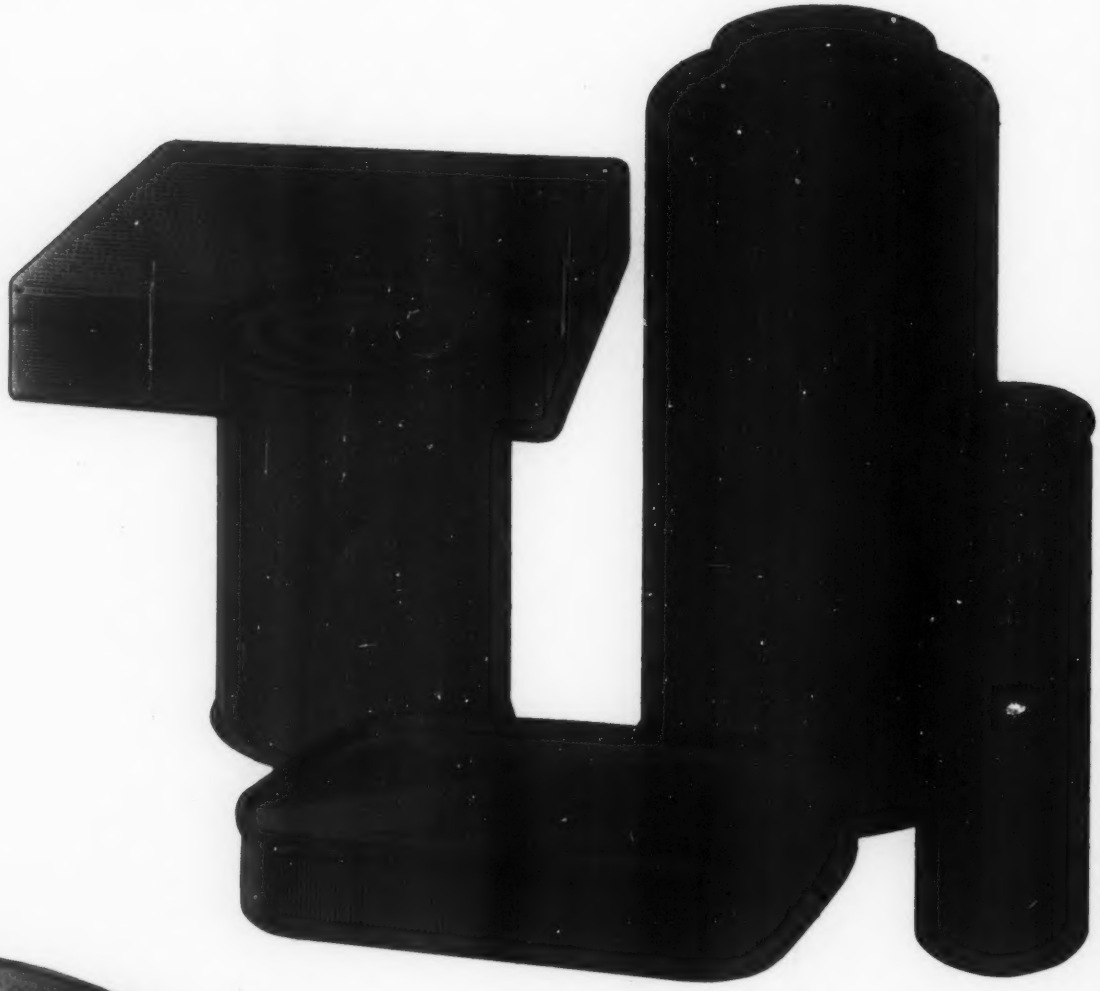
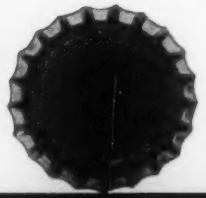
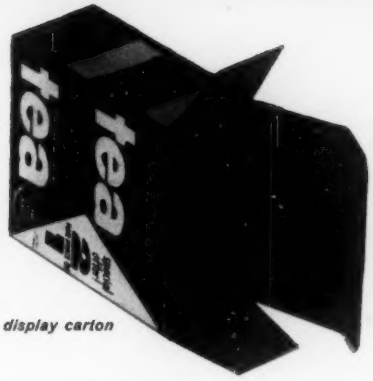


rigid aluminum foil container



aluminum spot crown

rigid aluminum foil tray



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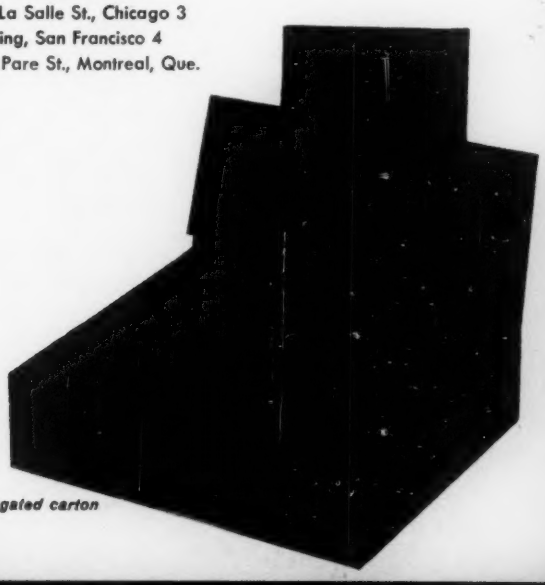
aluminum foil overwrap



laminated aluminum corrugated carton

U. S. patents digest

This digest includes each month the more important patents of interest to those who are concerned with packaging materials. Copies of patents are available from the U. S. Patent Office, Washington, at 25 cents each in currency, money order or certified check; postage stamps not accepted. Edited by H. A. Levey.

Container with Resilient End Closure and Method of Attaching Closure to Container, Walter J. Dobbins (to American Can Co., New York, N.Y., a corporation of New Jersey). U.S. 2,804,988, Sept. 3. A dispensing container for corrosive liquid products, comprising a sheet-metal body having an annular sheet-metal ring secured thereto, said ring having an outer upstanding countersunk wall snugly fitting within and permanently secured to the top end of said body in an end seam and further having an inner upstanding, substantially vertically coextensive locking wall setting off with said outer ring wall an annular countersunk channel adjacent said end seam, said inner locking wall terminating in a rigid, outwardly and downwardly curved annular locking bead overhanging said channel with its upper edge disposed substantially in the plane of the upper edge of the end seam, an end closure member of resilient plastic material having a thick depending annular flange permanently seated within and substantially filling said channel and compressed between said bead and end seam, the inner depending face of said flange having an annular recess enclosing said ring-wall bead for permanently locking said closure member against displacement from said channel to provide a liquid-tight closure for said container, said resilient plastic closure member having a domed breast terminating in an upstanding nozzle for the reception of a closure cap.

Dispensing Container, Hermann Kappler (to Niemand Bros., Inc., Long Island City, N.Y., a corporation of New York). U.S. 2,805,005, Sept. 3. A dispensing container comprising a hollow cylinder open at both ends, an internally re-entrant bead of a predetermined width at one end region of the cylinder, an apertured rotatable disk across the interior of the cylinder of a diameter such that its peripheral region lies within at least a portion of the bead width, a lower apertured disk across the interior of the cylinder adjacent to and in surface contact with the apertured rotatable disk, an annular, outwardly tapering flange integral with the lower apertured disk extending downwardly and having a force fit with the interior of the cylinder and securing the lower disk against rotation and in its predetermined position against the upper rotatable disk, a formed plug closing the other end of the hollow cylinder.

Continuous Feeder, Paul A. Coffman, Jr. (to B-I-F Industries, Inc., a corporation of Rhode Island). U.S. 2,805,036, Sept. 3. Continuous-feeding apparatus comprising two containers, a supply source for said containers, delivery-control means, a weighing device coupled to each of said containers, a discharge duct leading from said containers, second valve means in said discharge duct, means independent of said containers coupled to said weight-indicating means for imparting a progressive unbalance at a constant rate thereto and control means coupled to the weight-indicating means.

Machine for Forming Thermoplastic Bag Tubing, Arthur P. Klasing, et al. (to Central States Paper & Bag Co., St. Louis, Mo., a corporation of Missouri). U.S. 2,805,700, Sept. 10. A machine for forming thermoplastic bag tubing comprising a pair of spaced parallel roll supports for operatively holding two rolls of thin thermoplastic sheeting, means for drawing the thermoplastic sheeting from the roll in two marginally aligned webs, a pair of feed rolls for bringing the webs together in face-wise overlying relation, means for simultaneously sealing the webs together along a plurality of spaced parallel thin seal lines and severing the webs within the area of such lines to form a plurality of spaced parallel lengths of edge-sealing tubing.

Tape Dispensing and Applying Device, Emil Wayne Bollmeier (to Minnesota Mining & Mfg. Co., St. Paul, Minn., a corporation of Delaware). U.S. 2,805,764, Sept. 10. A compact hand-manipulatable tape dispenser adapted for the efficient application of single wraps of pressure-sensitive adhesive tape around wire bundles in inconveniently accessible locations.

Container Handling Apparatus, Robert E. Palmer (to Oswego Falls Corp., Fulton, N.Y., a corporation of New York). U.S. 2,805,753, Sept. 10. Apparatus for arranging containers, rectangular in cross section, advanced in single file procession in pairs with selected side panels of the containers of each pair in confronting relation, comprising a continuously moving conveyor, a plate secured to each side of the conveyor, a container guide rail, a container fulcrum member mounted on each plate, a container detector mounted on the conveyor intermediate said fulcrum members, and means to move simultaneously both of said container fulcrum members inwardly over the conveyor.

Can-Body Respacing Mechanism, Nelson Geertsen, Oak Park, Ill. (to American Can Co., New York, N.Y., a corporation of New Jersey). U.S. 2,805,754, Sept. 10. In a machine for making can bodies, the combination of a horn for supporting a plurality of can bodies arranged in spaced and timed processional order, a feeding device for propelling the can bodies along said horn, a segmental lug disposed adjacent the path of travel of said can bodies, a plurality of rotatable inside-support rollers, a plurality of rotatable outside-support rollers, a receiving conveyor and means for rotating said segmental lug in time with said feeding device for advancing said can bodies individually said extra distance for increasing the space between adjacent can bodies preparatory to reception of a respaced can body by said receiving conveyor.

Textile Package Formation, Arthur McLean Saum, et al. (to E. I. du Pont de Nemours & Co., Inc., Wilmington, Del., a corporation of Delaware). U.S. 2,805,765, Sept. 10. An apparatus adapted to handle running lengths of yarn and tow which are capable of being charged by static electricity which comprises two narrow, smooth endless belts adapted to travel rapidly at equal speeds and having vertical sections in contiguous relation to form a means for gripping the yarn or tow lightly and advancing it, driving means for the said belts, a pair of oppositely disposed squeeze rolls and a means for deflecting a portion of one of the said belts out of its normal path at the exit end and beyond the gripping section.

Double-Walled Container and Method of Fabricating, Orville B. Sherman (to Owens-Illinois Glass Co., a corporation of Ohio). U.S. 2,805,787, Sept. 10. A double-walled container comprising a uni-piece rigid outer container, the cross-sectional configuration of at least part of said body portion being greater than said mouth portion, an inner container disposed within said outer container, said inner container having at least part of its body of greater cross-sectional configuration than said mouth portion of said outer container.

Plastic Containers and Packaging Thereof, Robert E. Smucker (to Crown Machine & Tool Co., Fort Worth, Tex., a corporation of Texas). U.S. 2,805,790, Sept. 10. A cup-like, thin-walled, completely integral, frusto-conical container formed of a molded plastic material and having a frusto-conical thin side-wall surface open at its large end and closed at its small end by an integral lateral bottom wall, said container having a continuous integral thickened portion extending inwardly from the side wall adjacent and integral with the bottom wall, the upper surface of the thickened portion constituting a continuous annular shoulder adapted to engage an annular marginal portion of the bottom wall of a nested container.

Article Carrier, Edwin L. Arneson (to Federal Paper Board Co., Inc., Bogota, N.J., a corporation of New York). U.S. 2,805,791, Sept. 10. A carrier for a plurality of cylindrical articles having a top and a bottom and a pair of oppositely disposed side walls, said side walls having a plurality of openings at spaced

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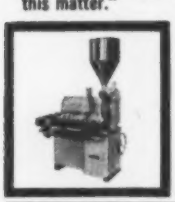
The unit "was delivered as scheduled", said a Riker Laboratories spokesman, "with a minimum of effort on our part, and we are most grateful to the Arenco Machine Company for their splendid cooperation in this matter."



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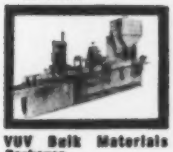

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U. S. patents digest

intervals along the junction of the side walls and the top and bottom, for receiving portions of the articles.

Corner Packing, James N. Butz, Detroit, Mich. (to Continental Can Co., Inc., a corporation of New York). U.S. 2,805,810, Sept. 10. A blank for a container corner packing and the like, comprising a section of flat corrugated board material having the shape of a right-angled isosceles triangle wherein the hypotenuse is parallel to the corrugations of said board material.

Multiple-Compartment Bag Having Readily Separable Individual Compartments, John Calasibetta, et al. (to Roto Bag Corp., New York, N.Y.). U.S. 2,805,814, Sept. 10. A multiple-compartment bag comprising an imperforate single-layer back panel and a plurality of front panels, each peripherally joined along three edges to said back panel to form with said back panel a plurality of separate bag compartments in side-by-side relation.

Packaged Thermoplastic, Robert W. Spake (to L. A. Dreyfus Co., Oak Tree, N.J., a corporation of New York). U.S. 2,806,595, Sept. 17. As a package, a container provided with a separable polyvinyl alcohol liner for said container for packaging thermoplastic material which sticks to said polyvinyl alcohol packaged within said liner in intimate contact therewith.

Combined Crate and Pallet, Marshall H. Beckner (to Tri-State Engineering Co., Washington, Pa., a corporation of Maryland). U.S. 2,806,623, Sept. 17. A combined pallet and crate structure, comprising a pallet-like deck of sheet-like form having legs, the deck being bent upwardly at one edge, a side wall hingedly connected to the opposite edge of the deck and foldable thereon, a second side wall hingedly connected to the bent-up edge, the last-named hinge connection being vertically movable on the bent-up edge, so that the second side wall, when in vertical position, will rest upon the deck and when turned to a horizontal plane, it may be disposed in such vertically spaced relation to the deck as to overlie other walls laid upon the deck, end walls engageable with the said side walls.

Tear Tabs for Tin Cans and Methods for Forming Them, Austin L. Morrill, et al. (to Raytheon Mfg. Co., Waltham, Mass., a corporation of Delaware). U.S. 2,806,628, Sept. 17. A metallic container formed with a tear strip, a tab formed with a V-shaped projection, the open end of the V near one end of the tab and of a width slightly in excess of that of the tear strip, having its axis of symmetry lying along the center line of the tab and welded to the tear strip along the projection in alignment with the tear strip.

Sectional Glass-Lined Container, Alec V. Osborne, et al. (to the Pfaudler Co., Rochester, N.Y., a corporation of New York). U.S. 2,806,629, Sept. 17. A rectangular corrosion-resistant vat comprising a plurality of flanged metallic plate-wall members having marginal edge portions of the inner faces thereof coated with corrosion-resistant metal and a vitreous enamel coating on the said inner faces of said members, with the flanges of adjacent plate members bolted together and the corrosion-resistant coating of the edge portions of adjacent plate members welded together to form a vat having continuous corrosion-resistant wall surfaces.

Can Carton, Arthur G. Irwin (to Paperbox Corp., Oakland, Calif., a corporation of California). U.S. 2,806,630, Sept. 17. A carton for carrying cans, bottles or the like, comprising a unitary structure having side sections connected together solely by narrow strips located at the outer extremities of their upper edges, bottom sections, notched central partitions, said sections joined by a plurality of flaps and folds to form said can carton provided with finger openings.

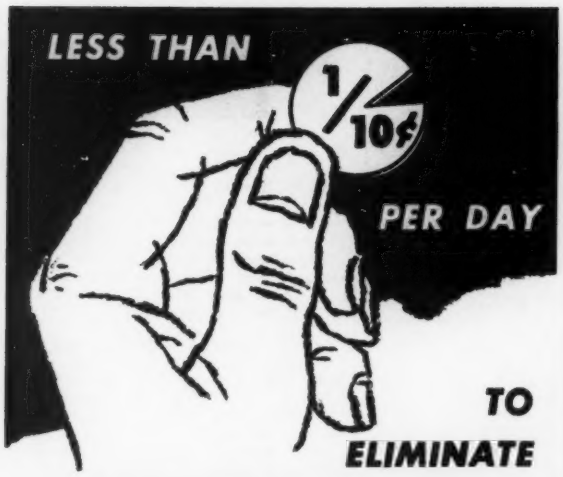
Package Sealing Machine, Arthur Gilbert Russell, et al. (to W. R. Grace & Co., Norwalk, Conn., a corporation of Connecticut). U.S. 2,806,632, Sept. 17. In a device wherein generally U-shaped clips having substantially parallel upstanding arms are supplied strung on a stiff, resilient carrier tape, means for freeing the clips from said tape and for delivering the freed clips.

Container and Closure for Dangerous Liquids, Vernon H. Wallingford (to Mallinckrodt Chemical Works, St. Louis, Mo., a corporation of Missouri). U.S. 2,806,637, Sept. 17. A valveless container for fluids, comprising a squeeze bottle having a neck, a closure member, means adapted to form a fluid-tight connection between the neck and closure member, an extension on the closure member, a nipple and a plurality of passages small enough to prevent continuous outflow of liquid through them when, without squeezing it, the bottle is inverted.

Release Valve for Pressurized Containers, Frank A. Ziheri, et al. (to Z & W Machine Products, Inc., Cleveland, Ohio, a corporation of Ohio). U.S. 2,806,638, Sept. 17. A valve-releasing mechanism for pressurized containers, said mechanism comprising a body member of molded flexible plastic material, having a fluid passageway extending through the wall thereof and provided with a grooved extension formed integrally therewith and extending upwardly to overlie the exit end of said passageway, a valve step slidable in said body member and a unitary handle removably secured to said body member.

Folding Paperboard Center-Handle Carrier, Arthur J. Weiss (to Continental Can Co., Inc., a corporation of New York). U.S. 2,806,643, Sept. 17. A folding paperboard center-handle comprising a plurality of panels together forming a tubular body and a handle hinged to and extending from one of said top panel sections.

Can Carrier Sleeve with Bottom Holding Flaps, Arthur Rous (to Federal Carton Corp., North Bergen, N.J., a



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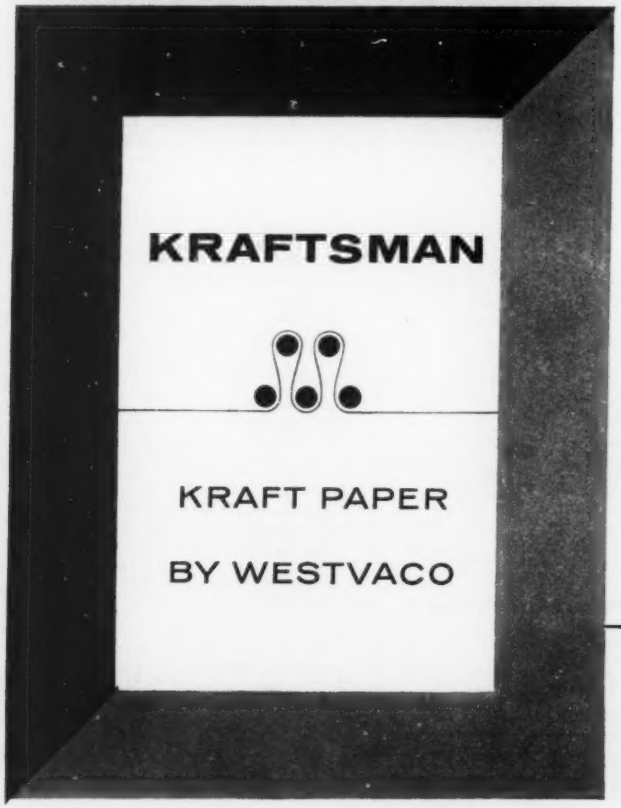

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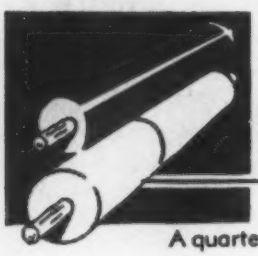

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A quarter of a century of engineered packaging

U.S. patents digest

corporation of New York). U.S. 2,807,357, Sept. 24. A can package comprising an end-recessed can and a sleeve formed from a unitary blank of material having opposed upper and lower walls and opposed side walls hingedly connected to each other to form a continuous rectangular band.

Container and a Handle, Herman H. Strauss (to Crown Zellerbach Corp., San Francisco, Calif., a corporation of Nevada). U.S. 2,807,389, Sept. 24. An article-carrying partitioned container comprising a body having opposed sides and end walls connected together along vertical fold lines, a plurality of flaps and a retractable flat handle member.

Ventilated Shipping Container, Lee M. Smith (to International Paper Co., New York, N.Y., a corporation of New York). U.S. 2,807,401, Sept. 24. A shipping container comprising side walls and end walls joined together to form a substantially rectangular tube, said end walls and the major portions of said side walls being slit along a horizontal line extending through said side and end walls, a bottom closure having openings at each corner, a top closure having openings at each corner and a rectangular liner slightly smaller than said rectangular tube.

Paperboard Shipping Container, George N. Nelbach (to Continental Can Co., Inc., a corporation of New York). U.S. 2,807,402, Sept. 24. In combination, a tubular paperboard shipping container with top and bottom closure flaps, a second tubular paperboard shipping container received within the first, hollow paperboard elements in the spaces between the two containers, spacer means forming a plurality of cells in the lower part of the inner container and a tray fitting into the upper part.

Triangular Carton, Maurice J. Joseph, New York, N.Y. (to The Lord Baltimore Press, Inc., Baltimore, Md., a corporation of Maryland). U.S. 2,807,403, Sept. 24. A triangular carton comprising three side walls connected one to the other to form a closed structure of triangular cross section, with an internal floor flap extending from each.

Window Carton with Cushioning Structure, Raymond A. Cote (to Container Corp. of America, Chicago, Ill., a corporation of Delaware). U.S. 2,807,404, Sept. 24. A collapsible paperboard display carton having opposed, relatively wide side walls of equal width and opposed, relatively narrow edge walls of equal width arranged in tubular form, a cushion member and cuts in each of the side walls forming window openings.

Method of Producing a Sterile Meat Package, Arno Brasch, et al. (to Electronized Chemicals Corp., Brooklyn, N.Y., a corporation of Delaware). U.S. 2,807,549, Sept. 24. The process for producing a sterile package of ground meat by the use of an electron accelerator having a capability of accelerating electrons to a velocity equivalent to substantially two million volts.

Exploded view of OEL Aerosol Valve.

Positive operation ... no clogging with the OEL AEROSOL VALVE

Simplicity is the keynote of the OEL Aerosol Valve. It has only three parts (see exploded view)—the nearest approach to integral construction of any aerosol valve. The unique rubber diaphragm insures accurate sealing, freedom from clogging, and positive action.

The OEL Valve is used on many well known spray and foam products. Interchangeable touch top fitments, easily assembled to the 1" cup, control flow rates and patterns. The same valve is used for both pressure and cold filling with proven results in uniform spray rates and patterns. Advantages are:

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2. **Minimum propellent loss.**
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5. **Simplified inventory control due to universal valve.**
6. **Mechanical break-up dispensing at no premium.**

The OEL Valve is now adaptable for products pressurized with nitrogen.

Send for information and samples to enable you to evaluate the OEL Valve on your products. Specify container size and dispensing fitments desired.

We are also manufacturers of precision equipment for pressure filling of aerosol containers.

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means reliability. For a third of a century, ever since Kraft paper was developed, Westvaco has supplied without interruption the Kraft paper needs of hundreds of converters and industrial users. In order to serve this growing market even more efficiently in the future, we've just installed in our Charleston, S. C., mill a new Kraft paper machine—the most modern in the world. If you're looking for dependability, combined with quality, call your Kraftsman paper representative at West Virginia Pulp and Paper Company, 230 Park Avenue, New York 17, N. Y.

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How

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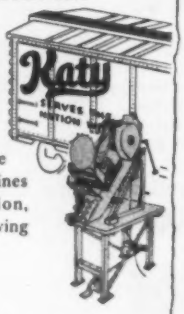
solves typical problems in

IDENTIFICATION and DECORATION

marking model railroad cars

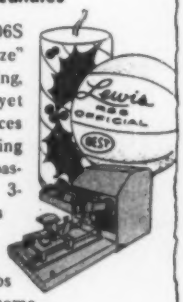


Several leading U. S. toy makers had used decals (costly both to buy and apply) on their replica model train cars. Authentic imprints are now made by Markem 25A machines—speeding production, lowering costs, improving looks.

imprinting food container lids

Bothered by the cost, delivery and inventory problems caused by short run lid printing jobs done "outside", a food retailer now prints the lids he needs *as* he needs them, using several 45ABE machines. Supply now matches demand, with the right marking method.

screen process printing: basketballs . . . to candles



Markem 90S and 106S machines "mechanize" screen process printing, giving fine detail yet heavy coverage. Surfaces and shapes now being marked range from basketballs, candles and 3-color instrument dials to play shoes, plastic bottles and billfolds. Excellent for many jobs—the *only* method for some.

These are typical of the thousands of marking problems Markem solves every year for all types of industries. The benefits of 46 years of experience are applied to every job—and can be to yours. Write Markem Machine Company, Keene 1, N. H.

MARKEM

Ten aerosol products win 1957 honors

Rexall Drug Co.'s "Stag" aerosol shave cream and Helena Rubinstein's "Five O'Clock" perfume mist (foreground in photo) tied for the best-of-show award in the packaging competition held by the Aerosol Division of the Chemical Specialties Mfrs. Assn. Announcement of the awards was made at the 44th annual CSMA meeting in Hollywood, Fla.

Also illustrated are first place winners in eight other product categories:

Insecticides, repellents and mothproofers, "Raid" mothproofer, S. C. Johnson & Son, Inc.; *Room deodorants,* "Adrienne Space Fragrance," Adrienne Distributors; *Paints, enamels, other protective coatings and paint remover,* "Kolor Brite" spray enamel, Martin-Senour Co.; *Other household products,* "Dogette" dog freshener, LaBora, Inc., distributor; *Hair preparations,* "Adorn" hair spray by Toni, The Gillette Co.; *Other personal products,* "Myrtle Mayfield" body lotion, Mayfield Laboratories, Ltd.; *Medicinal and pharmaceutical products,* "Alco-Mist" body spray, Rexall Drug Co.; *Industrial products,* "Vego H-18" electric motor and equipment cleaner, Chemicals & Materials Corp.

More than 200 entries from all parts of the world vied for honors this year. Judges were: John Gerald of Hammacher Schlemmer; Maurice E. Bale, Harold F. Ritchie, Inc.; Mrs. Edyth Ramsay, home equipment editor of *American Home;* Mrs. Paul Green, a New York housewife; Leigh Allen, and Arthur R. Botham, New York industrial designers.

Pressurized foods—a technical report

[*Continued from page 156*]

aseptic canning. The Avoset Corp., Gustine, Calif., has achieved notable success with aseptically canned whipped cream.

There are numerous products, such as salad dressings, toppings and others, that do not require heat treatment due to inherent product characteristics. The preserving or retarding effect of high sugar, high salt or low moisture concentrations has long been known and utilized (7).

The application of chemical preservatives to insure sterility offers only limited application to the pressurized-food field.

The use of sodium benzoate in the concentration allowed (0.1%) offers no surety of sterilization. It would be best not to rely solely upon a chemical preservative, but perhaps employ it in combination with one of the aforementioned methods of treatment.

The necessity for complete compatibility of product with container has long been recognized by the canning industry.

The need for data pertaining to container shelf life and performance will be a governing factor in the success of the pressurized-food field. It is now apparent that a pressurized food is more corrosive than a similiar product not packaged under pressure.

It is impossible to predict accurately the corrosiveness of any product because of the great many product formulations and the multitude of variations that can exist within one class of product. Each new for-

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mulation should be shelf tested over a predetermined period of time and over a predetermined range of temperatures. Many firms are now employing cyclic storage; that is, storage for short periods in different temperatures. Previously, most container testing has been done at set temperatures. It is felt by many that movement of a test container through several temperatures will give a better indication of the conditions the container might normally encounter.

Summary

To keep pace with the estimated potential of pressurized foods, research efforts should be based on the following lines:

1. Product formulation and reformulation to meet the specific requirements of a pressurized container.
2. Development of new valves and actuators to produce the desired dispensing characteristics.
3. Studies of compressed propellents and mixtures of these propellents.
4. Development of new container structures and systems for the varied requirements of pressurized foods.
5. Development of new processing equipment to increase the line speed and production handling of large volumes of pressurized foods.

When these factors are properly combined, it has been shown that it is possible to package in a pressurized container many food products that previously have been held to have no future in this packaging medium.

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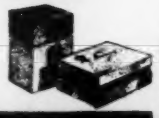

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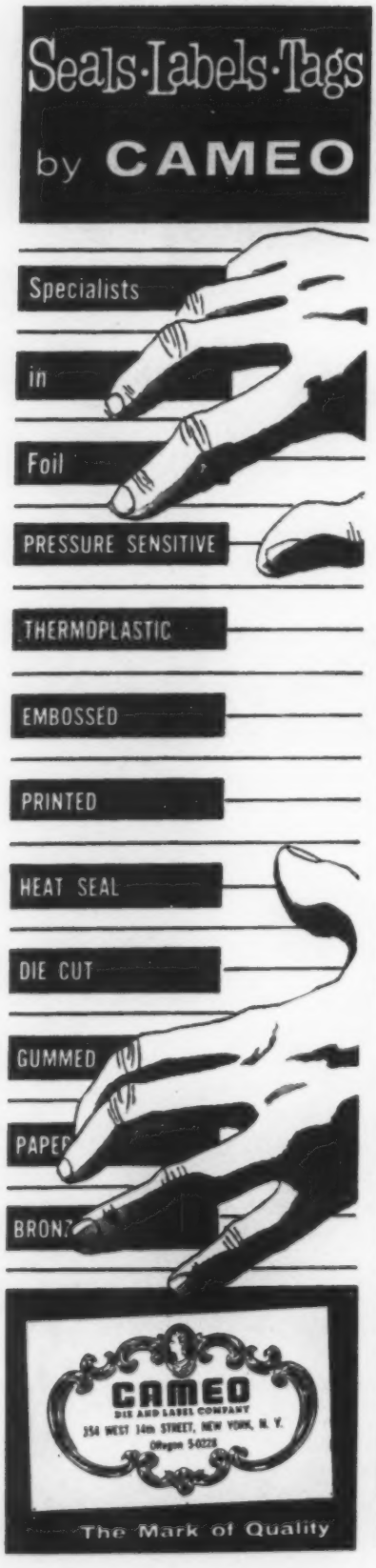

SIPMHE meeting highlights packaging gains

New developments in the field of industrial packaging and materials handling were featured at the 12th annual exposition sponsored by the Society of Industrial Packaging and Materials Handling Engineers, held in Atlantic City, Oct. 28 through 31.

A highlight of the exposition was a display of packages entered in the 1957 Industrial Packaging and Materials Handling Competition. Award winners were announced at the show.

Fifty-five manufacturers of packaging and materials-handling supplies and equipment exhibited their products in Convention Hall. Attendance was reported at more than 3,600.

John W. McReynolds of Kraft Foods Co. and SIPMHE board chairman announced that the 1958 exposition will be held Oct. 14, 15 and 16 in the Chicago Coliseum. The exposition again will be managed by Hanson & Shea, Inc., Pittsburgh, Pa.

Short course education sessions held in conjunction with this year's meeting were co-sponsored by Temple University.

John Mount, manager of the Marine Service Dept., Insurance Co. of North America, is the newly elected SIPMHE president.

The Best of Show award in the packaging competition went to James W. Sadleir, R.C.A. Radio & Victrola Div., for a "45" Record Changer package. Awards of first, second and third prizes were also made in the following categories:

Group I—*Corrugated or Solid Fibre Boxes:* 1st, A. G. Del Roccili, R.C.A., TV instruments; 2nd, Leo B. Chastin, Chevrolet-Flint Mfg. Co., ring gear and pinion unit; 3rd, Lewis Addezio, R.C.A.

Group II—*Nailed Wood Boxes and Crates:* 1st, David W. Scott, Flight Refueling, Inc., aerial refueling hose reel; 2nd, Ralph E. Hawes, R.C.A., receiver transmitter, radar; 3rd, Joseph F. Costa, Fisher Scientific Co., distillation column.

Group III—*Wirebound Boxes and Crates:* 1st, Haig E. Tashjian, National Electric Products Corp., low voltage electrical busway components; 2nd, Bernard A. Weber, General Electric Co., dental X-ray control; 3rd, Sandy Hill, Plasti-Line, Inc., Coco-Cola plastic outdoor sign.

Group IV—*Cleated Panel Boxes:* 1st, Forrest G. Baker, Herman Nelson Div., American Air Filter Co., Inc., "Amervent"; 2nd, A. G. Anderson, Northrop Aircraft, Inc., missile wings; 3rd, Paul J. Daum, Magna Power Tool Corp., Shopsmith home workshop.

Group V—*General:* 1st, James G. Witte, Convair—a Div. of General Dynamics Corp., machined spar rails for aircraft wings; 2nd, Carl R. Russell, The Garlock Packing Co., rotary mechanical seal; 3rd, Grover C. Hoskins, Ampex Corp., Ampex magnetic tape recorders.

Group VI—*Export Packages:* 1st, H. R. Welton, Northrop Div., Northrop Aircraft, Inc., guided missile, Hawk; 2nd, No award; 3rd, No award.

Group VII—*Materials Handling:* 1st, James W. Sadleir, RCA Radio & Victrola Div., "45" Record Changer; 2nd, A. George Sikorsky, Otis Elevator Co., 32-R escalator steps; 3rd, John J. Schloff, Long Mfg. Div., Borg Warner Corp., truck radiators.

European packagers set open congress for 1958

The European Packaging Federation will hold its first Open Congress next May during the World Exhibition in Brussels, Belgium, it was announced at the recent general meeting of EPF in Paris. Plans have been made to accommodate 500 member and non-member participants, with simultaneous translation of the proceedings into English, Dutch, French and German.

Among the themes proposed for discussion at the 1958 conference are: palletization and packaging; adoption of the system of packaging by volume instead of by weight; testing methods for paperboard and fibreboard foodstuff containers; economics and costs; automation in packaging, and package designs. In conjunction with the conference, EPF will present "Packaging Oscars" in a competition open to award winners in existing European packaging competitions.

At its Paris general meeting,

CONTAINER CORPORATION'S

flexible packaging

SHOWS AND SELLS!

In an age of expansive claim and counter claim, *seeing* is still the most convincing inducer of *believing*. A properly displayed product of quality, therefore, is its own best salesman.

Such products as textiles, meats, bakery goods, crackers, cookies, candies, fruits, produce and dairy specialties are a few of the categories superbly packaged to display their natural visual qualities, by the Flexible Packaging Division of Container Corporation of America.

From its exciting variety of films, foils, and plastics, Container Corporation can meet your product's special requirements for protection and promotion. The real difference comes in the addition of Container's superior design and printing to the brilliant luster of flexible materials. This combination brings you the packaging that most effectively *shows* and *sells* your product.

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Shampoos belong in PLAX bottles

Some things are made for each other. A good shampoo and a Plax squeeze-bottle, for example. The bottle feels light and easy in your hands, you can grip it firmly, set it down anywhere (no harm if it drops). It's equally at home in the shower or at the wash basin; puts the shampoo right on your scalp where you want it.

If you have children, you know what it means to have soft and unbreakable containers for every-day products. And when you travel, Plax bottles are ideal.

Many smart manufacturers offer you shampoos (and many other products) in Plax bottles. Look for their products.

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and these shampoos are...

EPF also revealed that it has set up a committee which is pressing for acceptance by all European countries of a standard-sized universal pallet.

The objective of this campaign, according to EPF, is to draw up a limited number of package sizes which can be used with one standard-sized pallet for intra-European trade. The committee has presented its proposals to the Economic Commission for Europe, the International Standard Organization and the Union Internationale des Chemins de Fer.

Designer conference

The fundamental concept that will dominate marketing in the next few years is *ease of access*—meaning the ability of the consumer to get the kind of product he wants, in the style, color and size of unit that best fits his needs, at a place readily accessible to him, packaged to meet his desires.

This is the opinion of Eugene B. Mapel, vice president, Barrington Associates, Inc., in a speech at the recent conference co-sponsored by the Package Designers Council and New York University Graduate School of Business Administration.

Mr. Mapel cited statistics showing that between 1946 and 1947 department-store net profit had declined from 7.8% to 2.65%; chain variety-store net, from 9.9% to 5.9%; hardware-store net, from 9.9% to 1.9%, and drug net profits, from 8.6% to 5.8%.

Morning session was chairmanned by Ralph Head of BBDO. Speakers were Francis Blod, Design Associates, Ltd.; Dr. Henry Bund, Research Institute of America, and Dr. Dudley Maynard Phelps, president of American Marketing Assn. and Professor of Marketing, University of Michigan. Karl Funk of PDC was chairman of a panel discussion on the role of packaging in integrated marketing. Robert I. Goldberg, Associated Industrial Designers, led a panel composed of Egmont Arens, Frank Gianninoto and Jim Nash. Mr. Head, Prof. Arnold Corbin of NYU and Charles Sevin of Alderson & Sessions. Summation was made by Prof. Hector Lazo of NYU. Ralph Thomas and Dr. W. Elvers of Bristol-Myers presented the case history of Ipana Plus.

WHAT MAKES A "HAM" INTO A STAR PERFORMER?

A ham in the meat department is very much like its counterpart in the theatrical world: *it must have the benefit of experienced showmanship* before it will attract the paying customers.

In the case of the star performer with the "Bar S" (Cudahy) label, the expert showmanship has been provided by Continental Can Company's gravure-printed over-wrap of Kaiser Aluminum Foil. And Cudahy's "Holiday Ham" now offers paying customers these added attractions:

Bright, clean colors, sanitary appearance for extra holiday appeal to shoppers—proved by the sell-out success of Cudahy's initial marketing of "Bar S" Holiday Ham, "Western Style" on the West Coast. Cudahy is now introducing "Bar S" Holiday Ham, "Texas Style" and "Mid-Western Style" on a nation-wide basis. As for convenience, the ham can be cooked, carved, served, stored—all in the original foil!

Original flavor is perfectly preserved by Kaiser Aluminum Foil because there's no pick-up of chemical or food odor, and the foil provides a perfect bacteria barrier.

No weight loss or drying out of these fully-cooked, boneless hams, because the foil over-wrap assures *zero moisture vapor transmission.*

Kaiser Aluminum will be pleased to furnish you the names of converters who are eager to work with you on similar applications of printed flexible foil packaging. Contact the Kaiser Aluminum Sales Office listed in your telephone directory.

Kaiser Aluminum & Chemical Sales, Inc., *General Sales Office,* Palmolive Bldg., Chicago 11, Illinois; *Executive Office,* Kaiser Bldg., Oakland 12, California.

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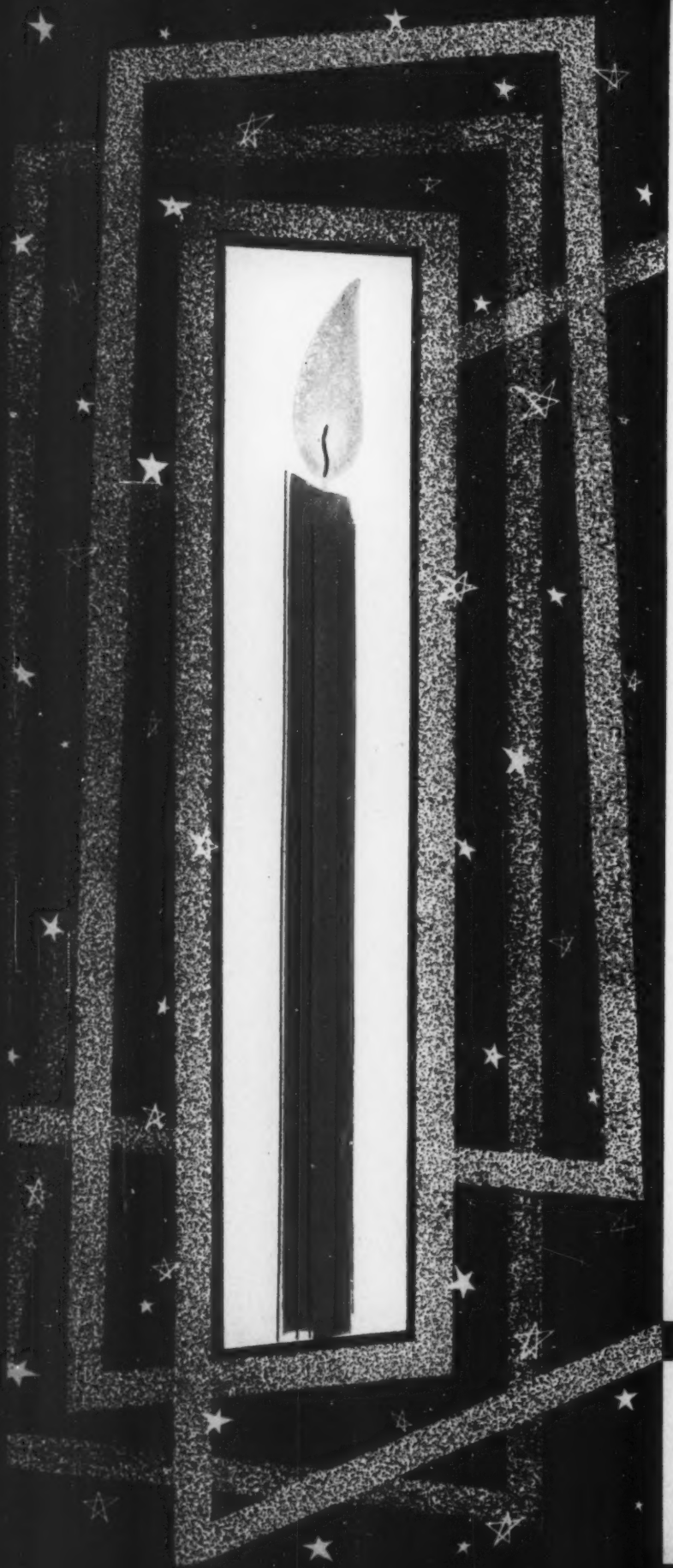

"There is an honor in business that is the fine gold of it; that reckons with every man justly; that loves light; that regards kindness and fairness more highly than goods or prices or profits."

"It becomes a man more than his furnishings or his house; it speaks for him in the heart of everyone. His friendships are serene and lasting."

Henry Wadsworth Longfellow

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Prosperous New Year
to our many friends.

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POWDER FILLING MACHINES. 12-page brochure describes line of rotary, in-line and single-head powder filling machines with operating speeds ranging up to 300 containers a minute that utilize controlled vacuum rather than pressure to effect fill. Pneumatic Scale Corp. (L-751)

LIQUID FILLING MACHINES. 14-page illustrated catalog describes extensive line of special-purpose, straight-line piston fillers for rigid, viscous or semi-solid products. Includes specifications. Hope Machine Co. (L-752)

PACKAGING WEIGHT RECORDER. Brochure describes line of electronic equipment for recording and/or indicating weights at a distance from scale to cards, tapes on punch machines or electric typewriters. Toledo Scale Co. (L-753)

"PILLOW" PACKAGER. 4-page folder describes automatic packaging machine for solids, powders, liquids or granules. Machine forms, fills and seals up to 240 single or double-walled pillow-type packages per minute in cellophane, heat seal papers, laminates, polyethylene and saran. Lynch Corp. (L-754)

LINED PAPER BAG. 8-page booklet describes use of pliofilm-lined paper bags for packaging of pre-ground coffee. Discusses customer reactions to package. Goodyear Tire & Rubber Co. (L-755)

GLUING MACHINE. 6-page folder illustrates and describes high-speed pre-breaking gluer for straight-line cartons from ¾ in. folded to 15 in. folded flat. Gives main features of machine. Post Machinery Co. (L-756)

CLOSURES FOR GLASS CONTAINERS. Illustrated brochure describes line of phenolic and urea stock-molded closures for bottles, jars and vials. Discusses custom designed closures service. Armstrong Cork Co. (L-757)

PROTECTIVE WRAPPING. Folder contains sample swatches of various types of trade-marked protective papers in a variety of colors. Samples include waxed, polyethylene, glassine, greaseproofs, and creped grades. Thilmany Pulp & Paper Co. (L-758)

LITHOGRAPHED CONTAINERS. 8-page brochure illustrates and describes this firm's facilities for the design and fabrication of lithographed metal boxes and cans. J. L. Clark Manufacturing Co. (L-759)

CLOSURE FOR PHARMACEUTICALS. 28-page catalog illustrates and describes line of pipettes, dropper assemblies, molded caps and closures, polyethylene vial closures, closure-dispenser combinations, applicators and biological and pharmaceuticals. Plastic Assembled Products Co. (L-760)

CASE HANDLING MACHINERY. Illustrated literature describes line of automatic case opening, loading and sealing equipment. Includes blueprint diagrams and typical installations. J. L. Ferguson Co. (L-761)

LIQUID UNITS PACKAGE. 8-page booklet illustrates and describes machine that forms and fills film, foil or laminated paper packets in size 4¾ x 4¾ in. with liquid and viscous materials. Brown Bag Filling Machine Company, Inc. (L-762)

BULK PACKAGING CONTAINERS. Illustrated folder discusses use of custom-designed corrugated bulk containers for packing of such products as powders, granules, chemicals and machinery parts. Gaylord Container Corp. (L-763)

POLYTUBING GUIDE. 4-page booklet has tables for finding the average micrometer reading and number of yards per pound of polyethylene tubing. Also lists gauge and square inches per pound of this material. Andmar Plastic Co. (L-764)

SURFACE SPEED INDICATORS. Illustrated 4-page, 2 color pamphlet discusses the features of a speed indicator. Dials are provided for readings of feet or yards per minute. Diagram shows moving surface in relation to mountings. Jones Motrola Corp. (L-765)

ALUMINUM FOIL MANUFACTURING. 12-page brochure describes company's facilities for producing rigid foil containers, packaging materials and other foil products. Also discusses lamination of aluminum foil to paper and paperboard. Cochran Foil Co. (L-766)

CONTRACT PACKAGERS. Illustrated 6-page folder describes company's marketing and production facilities to the trade, high speed filling, capping inspection and packaging. Lists types of products packaged—aerosols in glass and metal cans, liquids in vials, bottles and cans. The Fluid Chemical Co. (L-767)

FILMPRINTER. Descriptive 4-page folder on company's filmprinter press for printing all types of films, including polyethylene, vinyl, cellophane and foil. Lists features of machine and gives specifications. Kidder Press Co. Inc. (L-768)

INDUSTRIAL SCALES. 8-page illustrated booklet describes and contains specifications for line of "Shadograph" scales with illuminated dial weight indicator mechanism. Models available with 2,000 mg. to 100 lb. capacities. The Exact Weight Scale Co. (L-769)

PACKAGING HEAVY PRODUCTS. 48-page illustrated booklet contains case history studies on the packaging of heavy products such as pumps, machine parts, motors, plastics and nails, in corrugated boxes. Illustrates several corrugated box styles manufactured by this company. Hinde & Dauch. (L-770)

THIN-WALL CONTAINERS. Folder contains comprehensive description of line of 4, 8, 12, 26, 60 oz. capacity injection molding presses suitable for making thin-wall thermoplastic containers. Lester Injection Molding Machines. (L-771)

FIBRE CONTAINERS. Folder illustrates line of metal capped convolute and spiral

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EQUIPMENT • SUPPLIES • SERVICES

fibre cans, with such can tops as pouring spout, pouring plug and semi-perforated types. Cleveland Container Co. (L-772)

FLOCKED PAPER SAMPLES. Sample folder contains swatches of paper coated with "Ra-Nap" flock in various colors. Available in roll stock 27½ or 55 inches wide, and either plain or embossed. Vertipile, Inc. (L-773)

COATINGS FOR PACKAGING. Illustrated 12-page booklet presents case-histories of company's polyvinyl chloride and latex coatings for fibre drums, cardboard containers, and tapes. From B. F. Goodrich Chemical Co. (L-774)

MARKING AND PRINTING MACHINES. Illustrated data sheet describes line of machines for marking, imprinting and coding on flat, curved or irregular surfaces. Gives specifications on each, as well as suggested applications. Markem Machine Co. (L-775)

GLUING MACHINE. 4-page folder illustrates and describes a small mobile gluing machine that forms and glues standard trays, telescope cartons and hinged display cartons at speeds of 40 a minute. Peters Machinery Co. (L-776)

WRAPPING MACHINE. Data sheet illustrates and describes a high speed wrapping machine for such products as baked goods, meats, underwear, and shirts at speeds up to 70 packages a minute. Gives technical specifications and diagram of operation. Battle Creek Packaging Machines, Inc. (L-777)

TRANSPARENT SHEET. 4-page data sheet describes uses and charts the chemical and physical properties of cellulose acetate, cellulose acetate butyrate and cellulose triacetate transparent sheet for containers, envelopes and display items. Eastman Kodak Co., Cellulose Products Div. (L-778)

SEAMER FOR FIBER CANS. Illustrated four-page folder describes high-speed automatic seamer that puts bottoms and tops on fiber cans at speeds up to 400 cans a minute. Explains operation and gives specifications. Potter and Johnson Co. (L-779)

WRAPPING MACHINE. 4-page illustrated booklet describes a pouch packager for retailers that vacuum or gas packs, and then heat seals meats and dairy products, in "cellothene," a crystal clear film of cellophane and polyethylene. Gives specifications. Chesham Corp. (L-780)

CREASING MACHINE. 8-page booklet illustrates and describes machine for right-angle creasing of thermoplastic sheet—cellulose, acetate, vinyl acetate or cellulose nitrate sheeting up to .020 inches thick and 30 inches wide. Gives specifications and prices. Taber Instrument Corp. (L-781)

AUTOMATIC PACKAGING MACHINES. Illustrated 8-page folder describes and gives specifications of machines that form, fill, seal and code with "pillow" or "four seal" packages made of heat-sealed film. Accommodates liquid or dry materials. Stokes & Smith Co. (L-782)

PRESSURE CONTAINERS. Brochure describes construction and principles of operation of pressure containers. Gives data on valves, closures, propellants, and packaging uses. American Can Co. (L-783)

AUTOMATIC BAG FILLING MACHINE. 6-page brochure illustrates open-mouth bag filler that accommodates weights of from 25 to 200 lbs., and handles from 22 to 100 lb. bags per minute. Lists features of machine. Kraft Bag Corp. (L-784)

GLASS CLOSURES AND SEALING MACHINES. Catalog describes line of metal closures for bottles and jars, including vacuum caps, friction fit, threaded and non-threaded types. Also describes line of capping machines for affixing closures. Anchor Hocking Glass Corp. (L-785)

PLASTICS PACKAGING GUIDE. 12-page guide interprets and discusses company's various plastics materials in terms of their packaging applications. Includes data on films, molded and extruded containers, adhesives, coatings and laminations. Bakelite Corp. (L-786)

SEALING AND LABELING MACHINE. Bulletin outlines features and describes operation of automatic heat-sealing and labeling machine that feeds, folds and seals label and bag in one operation. Mercury Heat Sealing Machine Co. (L-787)

MARKING MACHINES. Pamphlet illustrates and describes a marking attachment which can be attached to any conveyor that marks, dates and codes filled bags, cartons, boxes, cans and containers. Lists standard models. Industrial Marking Equipment Co. (L-788)

SEMI-AUTOMATIC CARTONER. 8-page booklet describes operation and features of a constant-motion, vertical cartoner that sets up, then closes filled folding cartons at speeds up to 90 cartons a minute. R. A. Jones & Company, Inc. (L-789)

AGITATOR PUMP SYSTEMS. Illustrated 6-page folder describes line of pumping systems with 10-20-30 gallon tanks for coating materials, inks, varnishes and other liquids. Gives construction features. Graymills Corporation. (L-790)

SEALING AND FILLING POLYETHYLENE TUBES. Illustrated brochure describes line of polyethylene tube fillers and sealers, including bench, semi-automatic, automatic models. Shows model that operates at speeds up to 100 tubes a minute. Carbert Mfg. Co., Inc. (L-791)

ADHESIVES. Folder containing samples of "Thermogrip" bonded materials such as polyethylene films and coatings, papers and boards, foil, glassines, and wax coatings. Can be bonded at rate of approximately 250 feet per minute. United Shoe Machinery Corporation. (L-792)

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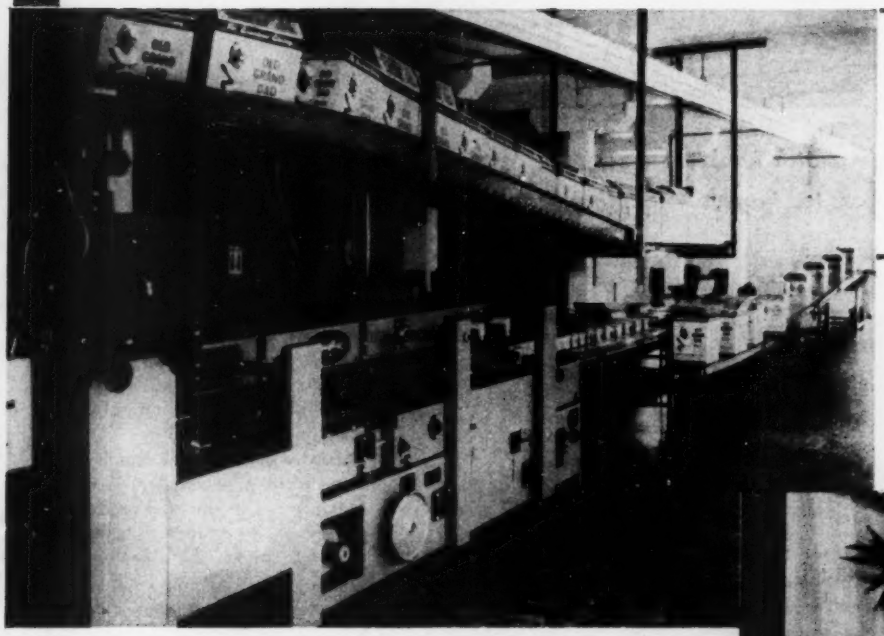

National Distillers can handle a wide range on the VF-150: 6" to 14" long, 3" to 7½" wide, 1" to 5" high. Sealed ball bearings on all turning shafts eliminate lubrication, reduce maintenance costs.

Each brand is wrapped in a different printed foil. Disposable, printed cellophane overwrap or cap wrap (shown) bears brand name, may be removed for gift purposes.

To meet the demand for a new style of holiday packaging, National Distillers chose the new Package Versaflow-150 for versatile, high-speed gift wrapping on its brands. In a completely automatic operation at four plants, prewraps are applied by two machines set in tandem.

Packages feed from a cartoner into the first VF-150, where printed, registered foil wrap imprinted with thermoplastic adhesive is applied and sealed. These transfer automatically into the second VF-150, which puts on the heat-sealing cellophane overwrap imprinted with the brand name.

The Versaflow's straight-through, continuous movement—without elevators or reciprocating motions—assures gentle handling for the full line of National brands. To get complete information on this versatile, high-speed Versaflow-150, contact your nearest Package representative.

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Print Best! . . . . Last Longest!

More and more packaging men are discovering that Steel Engraved Cylinders give them the printed package they are looking for. Converters are impressed with the way they out-last all other printing techniques and the fact that every impression is as perfect as the first—even after 3 or 4 years of continuous use! Moreover when printing critical materials you can be confident of perfect results with chromeplated steel.

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Make your next impression a permanent one—make it a steel engraved cylinder by Vitra-Tone. Write today for prices and details.

Aluminum 'pop' cans

Packaging of a humidity-sensitive product for maximum dryness and greater consumer convenience was a problem solved by the development of a seamless two-piece aluminum container (see photo) for the Air Reduction Sales Co. Div. of Air Reduction Co., Inc., New York.

Airco makes stainless-steel elec-

trodes for industrial use. It is vital to the effectiveness of electrodes that they be kept completely dry. The company's new telescoping aluminum "pop" can (so called because of the sound made when the top section is removed) is designed to meet this need. With its cans, the company says, customers need not maintain special storage equipment to protect the unused portion of the package.

"Pop" cans are made seamless by deep drawing a circular sheet of aluminum. The top section bulges slightly at the mouth to assure a snug friction fit and a waterproof, airtight industrial tape completes a hermetic seal. The container can be resealed for protective storage of the unused portion.

Airco formerly packaged its product solely in 25-lb. units which, once opened, required great care in storage. Under the new set-up, three sizes of "pop" cans are available: 9 in., 12 in. and 14 in., containing 6, 8 and 10 lbs. of electrodes, respectively. For shipping, the hand-filled aluminum cans are being packaged six to a carton.

Supplies and services: *Aluminum cans by Kaiser Aluminum & Chemical Corp., 1924 Broadway, Oakland 12, Calif. Paper labels by Bromley Press, 56 Cooper Sq., New York. Tape by Bauer & Black Div. of Kendall Co., Polyken Industrial Tape Dept., 222 W. Adams St., Chicago.*

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New paper machine boosts Thilco capacity, improves converting quality

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NEW PAPERMAKING GIANT
The birth of our seventh paper machine boosts our productive capacity and greatly improves converting paper finish. A BIG BABY—this 147-inch trim Yankee Fourdrinier boasts a 15-foot diameter drier which is the largest of its kind in North America. It helps to account for the superior high glazed finish and excellent converting qualities these specialties and base stock papers provide.
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BETTER SERVICE TO CONVERTERS
Thilco's seven paper machines provide greater opportunities for faster deliveries of specific grades with flexible machine fills in 90, 100, 120 and 147-inch widths. Consult the Thilco representative best located to serve you for complete information and samples—or write direct to the mill.
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In your company he may be called the Sales Manager . . . or the Merchandise Manager . . . or the Distribution Manager; the title isn't important. The chap we're talking about is the one whose interest in the packaging function sometimes may be considered secondary, while the successful completion of his duties depends in a significant measure on the appearance of your company's packages and the protection they give to your products.

If this man, whatever his title may be, doesn't get his own personal copy of Modern Packaging every month to keep him up-to-date, you've a "packaging orphan" on your hands. While he should be, he probably *isn't* up on all the latest techniques of package merchandising, on how to package to obtain sales in multiple units, on what's "hot" in protective and decorative packaging. . . .

Modern Packaging isn't a cure-all for this man, but it will keep him posted on the important packaging developments he ought to know about. A twelve month subscription—including the famous annual Encyclopedia Issue—for him costs only $7.00 in the United States and Canada, $20.00 elsewhere. Write today; we'll enter his subscription immediately and bill your company later.

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Canadian exposition

Exhibits showing improvements in paper, plastics, foil, tin, glass and other packaging materials highlighted the recent 6th Canadian National Packaging Exposition in Toronto. In all, 176 exhibitors participated in the three-day affair, which "has become the largest single trade show in the country," according to L. G. Jamison, general manager of Packaging Assn. of Canada, its sponsor.

Variety was the keynote of the exposition. Exhibits in the show's 325 booths ranged from thumbnail-sized perfume bottles to giant fork-lift trucks and other materials-handling equipment. New applications from the corrugated-board industry were exhibited; a variety of plastic containers and paper products was shown, as were collapsible tubes made of tin, lead, plastics and aluminum. Among the exhibitors were printing, package-design and advertising firms, as well as manufacturers of machinery, packaging materials, containers, materials-handling equipment, point-of-purchase displays and adhesives.

At an awards banquet on the second day of the show, the association's Gold Award for outstanding contribution to the field of packaging in Canada was presented to Herbert S. Romani, vice president and director of purchasing, Christie-Brown & Co., Toronto. Mr. Romani was founding chairman of the first Canadian National Packaging Exposition, as well as PAC's first president. The award was presented by the association's current president, T. M. Dutton.

The 1958 exposition will be held next Nov. 4-6, in Toronto.

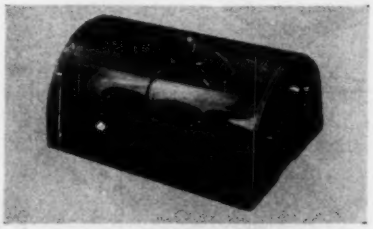
Stitching for display

[*Continued from page 123*]

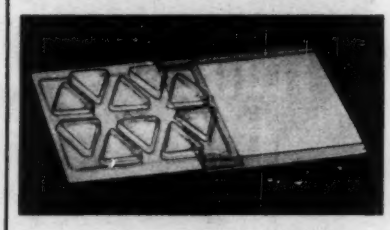
maximum visibility and working room. Because the machine affords a narrow stitch, it is efficient for carding Baby Dude jigs. These smaller lures are not encased in tubes, but stapled to cards through the grommet (an eyelet to which the leader fastens) and over the curve of the hook. A dozen jigs are fastened to each display card.

Like the air stapler for Super Dudes, the wire stitcher for Baby

A striking and attractive blister package adopted by W. R. Sweeney for rubber baby spoons. It displays, protects, adds sales appeal . . . automatic sealing assembly.



A luxurious "quonset" style acetate box designed for Modern Forge Mfg. Co., Inc. added glamour to the merchandise, created new interest, skyrocketed sales.



A novel idea in packaging carbide tips introduced by Vascoloy-Ramet Corp. pointed to the versatility of the "slide-pack". Protects individual parts, permits easy identification and selection.

We invite your inquiries on your packaging problems

Plastic Container Division

Plastofilm INC.

916 WEST UNION AVENUE, P. O. BOX 831, WHEATON, ILLINOIS

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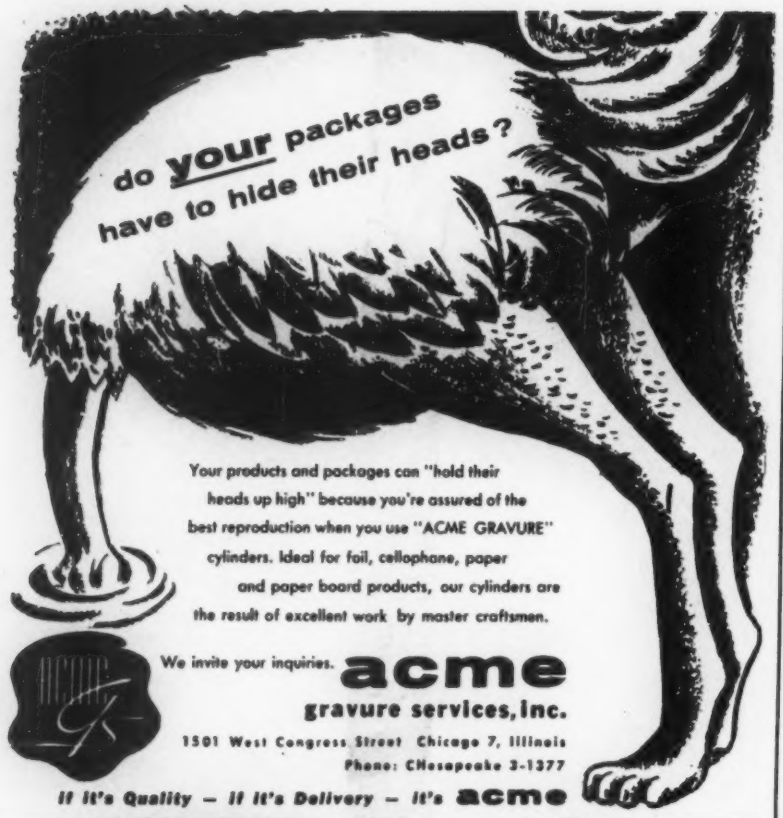
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IMS SILICONE SPRAY will cut your scrap and stoppage rate—Save You Money! Try it on your packaging line—you'll see why almost overnight this amazing anti-stick material has become a necessity in the modern high-speed packaging field!
PRICES: $ 2.00 Per Sample Can
$ 18.00 Per Unbroken Dozen
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Delivery FREE Anywhere in the U. S. A.
Still lower prices on larger orders shipped in one gross lots on any schedule you request
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WYoming 1-1424

Dudes means greater packaging efficiency. Formerly, Baby Dudes were stapled one to a card, then bagged for mass shipment. Now one woman operator can stitch 500 12-lure cards a day. The display card of a dozen lures stands a better chance of getting valuable counter or wall space at the retail outlet than did the former individually carded fishing lures.

Another successful modification of stapling to Barracuda packaging, the company reports, has speeded up production 25 times while reducing labor costs a full 75%. The company manufactures a monofilament nylon leader that is coiled on a winder into 10-yd. lengths, then packaged in a cellophane envelope with a stiff paper label. Previously, these leader coils were hand tied to prevent unwinding in the package. Now a stapling plier does the job much faster and more economically. With the aid of the plier, the company reports, one machine can produce up to 500 doz. bound leader coils per day.

Barracuda's dependence on staples for greater packaging efficiency and cost savings extends even to the preparation of shipping cartons. These corrugated boxes formerly were formed with a gummed paper tape. But a foot-operated stapling machine now does the same job five times as fast, the company says, making as many as 100 boxes an hour. And Barracuda reports that it has been its experience that staples hold fast under almost any storage and handling conditions.

Squeeze containers

[*Continued from page 110*]

the sphere of product protection. Hundreds of lining materials have been tried, but in the future it is believed that three or four will be found to do most jobs, similarly to what has been done with closure linings.

Experiments already have been made indicating a reduction of the permeability of lighter fluid from 20% with regular polyethylene, to 5% with high-density polyethylene and down to 0.2% with a lined high-density polyethylene container.

The Davol high-density polyethylene nursing bottles now on the market demonstrate a plastic bottle that

can be heat sterilized. The first commercial packaging applications of this type of material will break soon, with production orders for containers now in process by at least one supplier, to hold several different products including drugs, toiletries, cosmetics and various household items.

And so far, little has been said about the possibilities of using, as the container material, vinyls, nylon or the new fluorocarbon plastics with their great chemical inertness and ability to withstand sterilization. While these materials are still high cost for practical application, they cannot be ruled out when contemplating the future.

Polyethylene bottle makers are even eyeing the aerosol field. Where plastics are desirable in an aerosol container, instead of glass or metal, they believe that the tough, less-permeable, rigid new polyethylene formulations, plus appropriate linings, will do the best job yet at the lowest price.

Polyethylene containers are on the move—and the only way they can move is up!

Flying splicer

[*Continued from page 103*]

psychological stimulus of workers through more consistent running time and the freedom of the operator to concentrate on vital machine adjustments—that do result in increased production. These savings all add up in such a big way that Birds Eye is planning to have four of the splicers in operation at Wayland during the coming pack.

Here is how the company will figure the savings to be gained on these units, per season:

Cost of four splicers ($1,850 each)	$7,400
Savings of one service man (over 120-day season)	3,600
Savings in wasted panels (0.6 cents each)	1,123

Most companies do not operate at the high wrapping speeds used by this firm, but neither do they pull off filled cartons during roll changes. Therefore, it is pointed out, many packers can utilize the efficiency of the splicer to realize even larger savings.

With a theoretical four-wrapper filling and packaging set-up, run-

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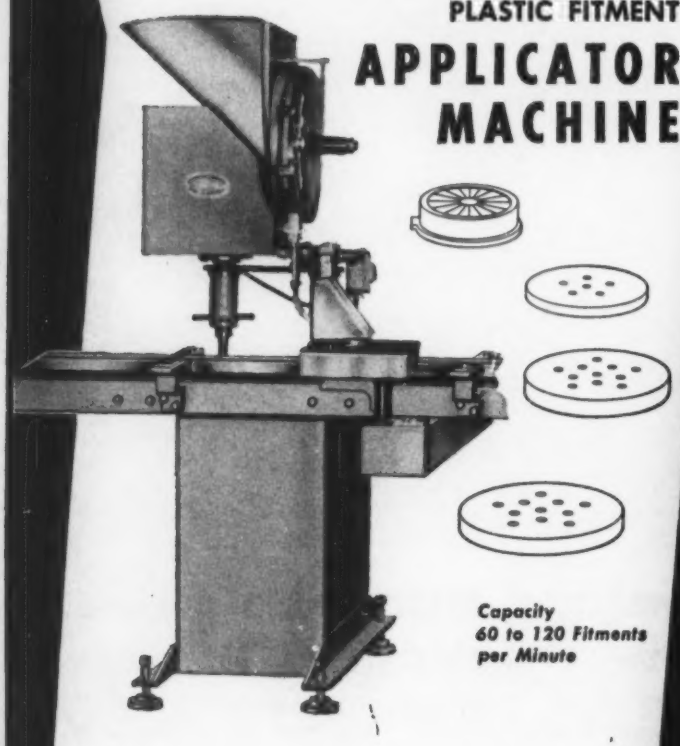

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ning at 120 packages per minute with 4½ workers per line, there would be eight roll changes per machine per shift. The extra service man would require an estimated time of 1 minute to make each of these changes.

Here is what the automatic splicer could save per day on the 16 roll changes per machine that would occur, in such a case, in a two-shift day:

Cost of four splicers	$7,400
Savings of one service man	30
Savings in wasted panels (at 0.6 cents each)	6
Savings in lost production (at 5 cents gross margin per package)	394
Savings in lost man hours (at $1.20 per hour)	19
Total savings per day	449
Amortization period	16 days

10 seconds to sell

[*Continued from page 96*]

a closed board set-up box. In the TMA display it uses the bottom of the set-up box inside a folding carton with a die-cut, free-form transparent window. The obvious purpose is to show contents of the package without requiring the shopper to remove the lid.

The company has not offered these gift sets in supermarkets before. So the new package is itself a test that may result in a standard item for such retail outlets. With retail trends so strongly toward self service today, "we always look at the buy appeal of the packaging," says merchandising manager, John B. Miller.

For Mennen, the big question in this TMA test is whether Christmas gift-toiletry items for men and women will sell without clerks and without the complete variety offered in department and drug stores.

Cheramy, Inc., also has die cut a window in its April Showers toilet package to display its toilet water and cologne better.

Helene Curtis Industries, Inc., the only manufacturer with two packages in the display, created both especially for supermarkets. Its Tweed shaving soap and cologne and its Kings Men after-shave lotion and cologne are in full view in tray packages with cellulose acetate lids. Although the individual items are stock merchandise now, they have only recently

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been introduced in supermarkets. As gift sets, they were first tested in a limited way on the West Coast last Christmas.

A Cutex set in a transparent molded polystyrene box, designed and produced within the company, is the only product not offering a new package. Henry Fetz, sales manager of Northam Warren's grocery division, explains that the company's success with this package made change unnecessary. And success in this new test, he adds, still depends on the packaging: "If you have many items (there are nine in the Cutex package), the customer wants to see them and know the value."

Each TMA display holds 44 packages (eight to 10 of each of the five products) retailing for a total of $84.30. The discount to the supermarket varies from 28 to 30%. All packages carry removable price tickets.

TMA guarantees retailers the sale of the merchandise. All sets except Cutex are break-up packages that permit retailers to sell items individually after Christmas.

The test started about Thanksgiving Day. Regular weekly and emergency-by-phone restocking service is provided by each jobber. Individual manufacturers and TMA will tote up results early next month. Probability is that the test will be expanded next Christmas to include eight to 10 packagers.

Results of this Christmas gift-set test and the packaging success stories being told on other non-food racks in supermarkets should supply ideas that almost any packager of consumer products can borrow and apply profitably to his own package.

What about polyethylene? First of a series

[*Continued from page 100*]

ethylene made such good progress on bag machines and not on overwrap machines? The answer consists of many parts.

Partly it is because converters, with production lines humming on fabrication of bags, have pushed the development of machines specially designed or equipped to handle these products, while no such push has come from packagers on overwrapping machines.

Partly it is because with bag- and pouch-making machines, working with relatively narrow widths or tubular forms of film, it has been easier to move polyethylene film through at satisfactorily high speed.

Partly it is because the matter of making a simple lap or fin heat seal, as in bag making, is no problem at all compared to the difficulty of sealing through the six or eight thicknesses of material encountered in the folds of an overwrap.

Partly it is because of a disagreement as to the best approach to solution of the film's basic machine-handling problem: its limpness, stretchiness and tendency to static cling, which makes it impossible to "push" through machinery at high speeds, as paper and cellophane are pushed. Polyethylene, and other soft films, must be "pulled"—and with infinite care to avoid distortion and failure of register.

One school of thought among machinery makers holds that the handling problem can be licked by adaptation of existing cellophane-machine principles and argues that this is the most practical approach, since few big users of overwrap machines would be willing to throw out their present equipment and risk a big investment in something completely different.

The other school—favored by some of the plastics producers—contends that adaptation is no real solution; that what is needed is to start from the ground up and design wholly new machines, operating on new principles, to accommodate not only polyethylene, but all the other limp thermoplastic films.

There has been some holding back, too, because of a feeling that improved properties of the newer polyethylenes now coming along might obviate the problems and throw out expensive machine-development programs. But major producers of resins and films reject this viewpoint; they say that the stiffer, high-density films may reduce, but will not eliminate, the special-handling problem and that there will be little change in the basic heat-sealing characteristics of polyethylene.

Nearly as great a problem as the sealing of polyethylene is how to

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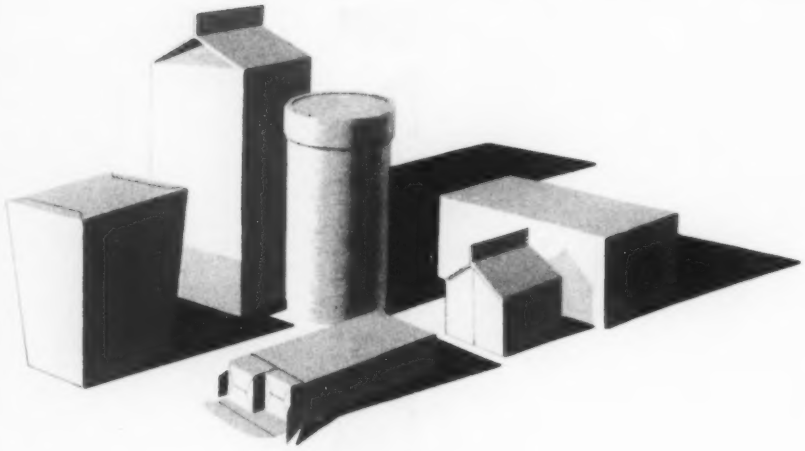

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get it open again. It is harder to tear than cellophane—and this nearly wrecked the cellophane overwrap for cigarettes, until the tear tape came along. Nobody yet has found a practical tear tape that will cut through 1-mil polyethylene.

Today, happily, most of these problems and arguments are beginning to resolve themselves.

One major producer of polyethylene resin has had a special research team working on the problem of overwrapping and heat sealing for over two years and has come up with important findings which have been passed along to packagers and suppliers.[3] And progress is even being made on a practical tear tape for polyethylene.

One leading manufacturer of wrapping machines has just announced that every model he produces can now be built to handle polyethylene film.[4] A second machine maker offers similar capabilities on one wrapping machine.[5]

In England, the British manufacturer of Dunhill cigarettes, reports successful overwrapping of 10-package bundles over a period of two years, using a modified American machine. Line speed is 30 completed packages per minute with a 3-mil polyethylene film.

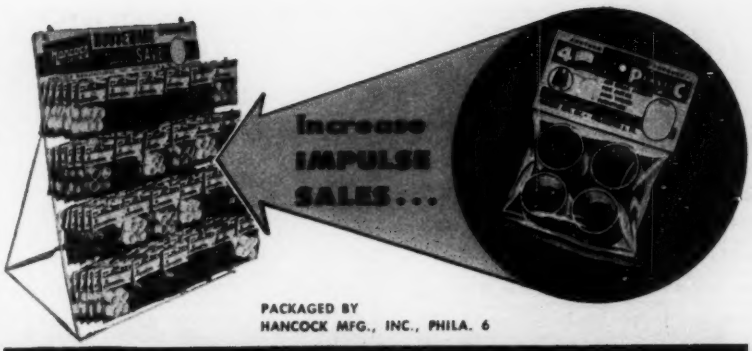
And in this country a major food packager, the Quaker Oats Co., has just initiated a development program at Pennsylvania State University to devise improved techniques for the wrapping and heat sealing of polyethylene film.

All this is to the good. But it is only a tardy beginning toward removal of barriers which block a major step forward in packaging. It is a problem which will come up time and again as new plastic materials move into this field.

What is being done, what can and should be done, will be examined in detail in succeeding articles.

[3]Bakelite Co., New York. Technical releases Nos. 6, 8 and 9. Also, see "The Molten Bead Sealer," MODERN PACKAGING, Dec., 1956, p. 153.
[4]Hayssen Mfg. Co., Sheboygan, Wis. See "Wrapping Unit for Polyethylene," MODERN PACKAGING, Oct., 1957, p. 182.
[5]Wrap-King Div., Crompton & Knowles Packaging Corp., Holyoke, Mass.

ADDENDUM: Case-sealing machines appearing in the foreground of the Procter & Gamble plant picture on pages 128-129 of our September issue are "Packomatics," made by the J. L. Ferguson Co., Route 52 at Republic Ave., Joliet, Ill.



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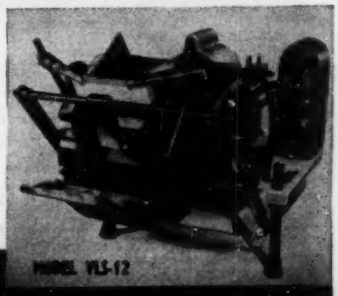

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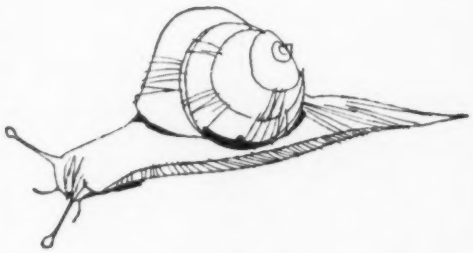

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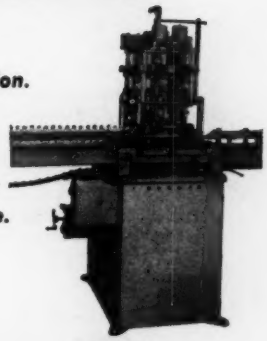

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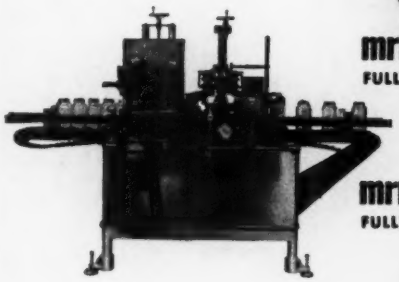

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Manufacturers of a complete line of fully automatic and semi-automatic liquid filling and labeling equipment.

(*Continued from page 232*)

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183 Peter Partition Corp.
163 Pfizer, Chas. & Co., Inc., Chemical Sales Division
197 Plastic Artisans, Inc.
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212 Plax Corporation
66 Pneumatic Scale Corp., Ltd.
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67 Rowell, E. N., Co., Inc.

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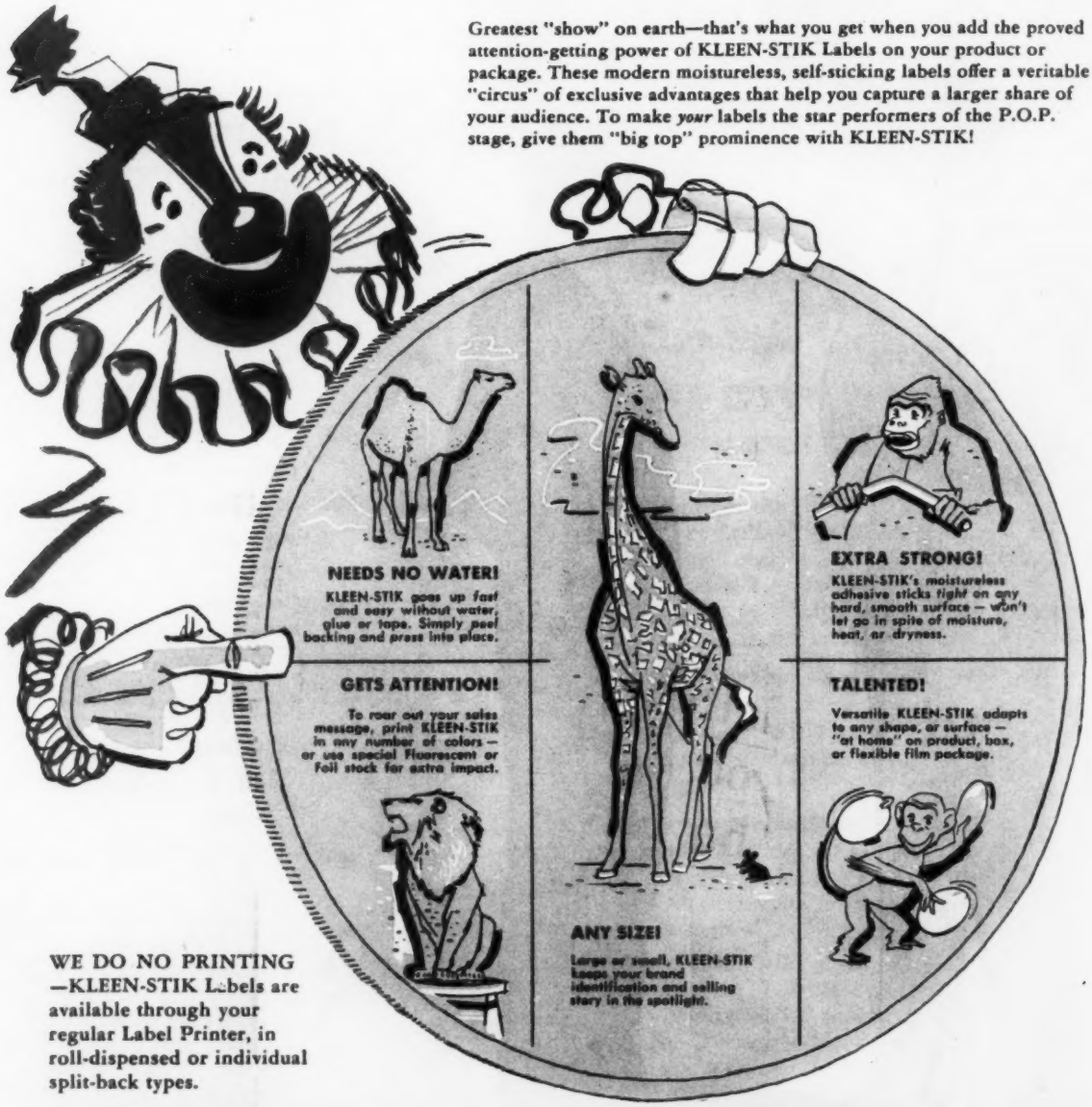
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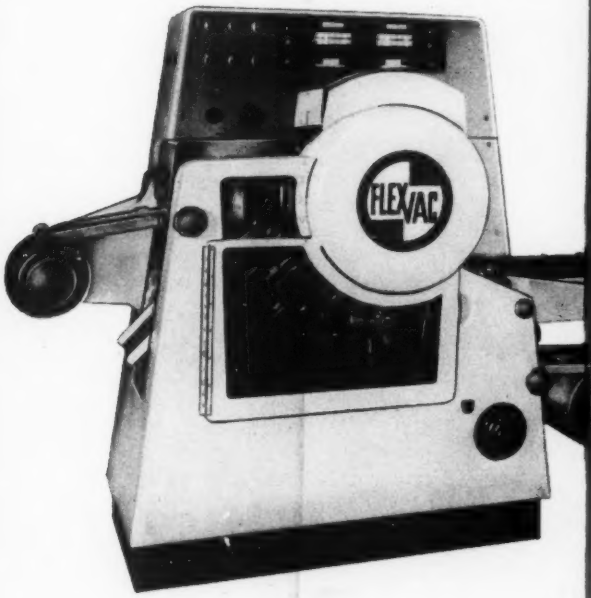

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